POSTER

FORBIDDEN CITY REVEALED

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NATIONAL GEOGRAPHIC



China

INSIDE THE DRAGON

SPECIAL ISSUE

SUPPLEMENT TO NATIONAL GEOGRAPHIC, MAY 2008

PRODUCED BY NATIONAL GEOGRAPHIC MAPS
FOR NATIONAL GEOGRAPHIC MAGAZINE

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The Roof of the World

The Himalaya reached its status as the world's tallest range about 20 million years ago and still rises half an inch a year as the Indian landmass continues to push north. The Plateau of Tibet, at an average elevation of 13,000 feet, is scattered with mountains that top 20,000 feet. Permafrost regions cover over half its surface; much of the plateau is protected for wildlife.

Deserts

The fabled Silk Road divided around the towering dunes of the Taklimakan Desert, which dominates a basin shaped 250 million years ago as Eurasia was pieced together. Its southern edge holds oases like Hotan, renowned for jade washed down from the Kunlun Mountains. Eastward, expanses of rock and salt marshes mark the Gobi, a Mongolian word for desert.

Loess Plateau

The Yellow River's name reflects the color of dust that blows east from the desert and creates a fine soil called loess. Deposits as thick as a thousand feet form the fertile but unstable Loess Plateau, gullied by erosion. Farmers from the prehistoric to the present have carved homes into loess hillsides, vulnerable to quakes that, across China, killed millions in the past century.

Karst Landscape

Traditional Chinese landscape painters found a muse in regions like Guilin, where haunting karst peaks line rivers like dragon teeth. On land that emerged from the sea 215 million years ago, eons of uplift and erosion etched limestone into serrated hills, stone forests, and caverns. To the southwest, rivers plunging off the Plateau of Tibet carve spectacular gorges.

Sichuan Basin/Southeast

Ringed by mountains raised by a series of tectonic collisions, the Sichuan Basin is drained by Asia's longest river, the Yangtze. China's southeastern checkerboard of worn granite mountains and basins took shape 140 to 65 million years ago as tectonic plates pushed land together to form southeastern Asia. Taiwan's mountains, on an active tectonic boundary, are still growing.

North China Plain

The fertility of this alluvial flatland—layers of silt deposited thousands of feet deep by the Yellow River and its tributaries—powered the rise of China's first dynasty 4,000 years ago. Connecting the realms of the Yellow and the Yangtze in the south, the Grand Canal, the world's longest at more than a thousand miles, was built in stages starting in the fourth century B.C.

Boreal Treasures

Northeastern mountain ranges hold China's largest virgin evergreen forests and shelter endangered Siberian tigers. Eroding mountain sediments created the fertile, heavily farmed Northeast China Plain. Near Wudalianchi, in Heilongjiang Province, crater lakes fill 5 of the 14 cones of a 200-square-mile volcano field, which last saw an eruption in the mid-1700s.

City Population

More than 100 cities in China have a population of at least 1 million, twice the number than in 1980.

BEIJING	More than 4 million
Nanjing	1 to 4 million
Lhasa	100,000 to 999,999
Lijiang	Fewer than 100,000

Land Cover

Some areas are mixtures of cover types.

Shrubland
Cropland
Bare Ground
Woodland
Grassland
Evergreen Forest
Desert Plateau
Deciduous Forest
Roads
Railroads

National Boundaries

The People's Republic of China is the world's fourth largest country, only slightly smaller than the United States. Its borders expanding and contracting over millennia, China reached roughly its current shape in the 18th century, during the Qing dynasty. The scoop of its northern border marked the last major change to the country's outline, when Mongolia became independent in 1924.

China shares boundaries with 14 countries along its perimeter of some 13,740 miles. Only Russia counts as many neighbors. Though China and India have recently forged stronger economic ties, their border remains contentious at several points. China claims as territory a stretch of land in northeast India, east of Bhutan, but does not occupy it. This dispute dates from 1914, when the border, called the McMahon Line, was drawn in a treaty between Tibet and the British colonial government of India. China did not recognize Tibet's 1913 claim to independence, so it has never considered the treaty legal. China also claims but does not occupy two small sections along the western Himalaya border with India. In turn, India claims the Kashmir region of Aksai Chin, which China firmly occupies.

TEXT: SHELLEY SPERRY AND JANE VESSELS. **PRODUCTION:** DIANNE HUNT, MAP; MOLLY SNOWBERGER, DESIGN
CONSULTANTS: JONATHAN C. AITCHISON, UNIVERSITY OF HONG KONG; AND STEPHAN GRAHAM, STANFORD UNIVERSITY **MAP EDIT:** DAVID MILLER. **GIS:** THEODORE A. SICKLEY
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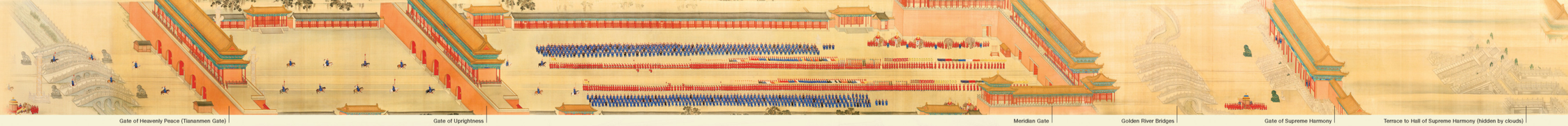
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KILOMETERS
0 100 200 300 400
STATUTE MILES

NATIONAL GEOGRAPHIC

China

Journey of Rock and Water

One of the most dramatic collisions in the geologic annals of Earth transformed the land that is China. India's tectonic crash into Eurasia starting 35 million years ago raised the Himalaya, crowned by Mount Everest on the China-Nepal border, and lifted the Plateau of Tibet, the world's highest. The new elevations shifted climate patterns, creating deserts to the north and drenching southeast China with monsoon rains. From the plateau's glaciers, China's lifeline rivers—the Yangtze and the Yellow—journey east to the sea through progressively lower but still rugged elevations. In the east, on plains of river-borne soil and land bounded by weathered ranges, China became, about 6500 B.C., one of the first regions to domesticate crops and animals, sustaining a population that has grown into Earth's largest.



Emperor's Homecoming
Outriders of the Kangxi emperor's traveling retinue enter the guarded heart of the Forbidden City in 1689 after an eight-week tour, one of many the Qing dynasty emperor took through his kingdom. On this scroll commemorating the trip, military and civilian elites line a courtyard to welcome Kangxi. Beyond, sedan bearers wait to carry him toward the Hall of Supreme Harmony, shrouded in clouds to convey the divine nature of imperial rule.

"PICTURE OF THE SOUTHERN TOUR" (1691–95) BY WANG HUI, PALACE MUSEUM, BEIJING

Gate of Heavenly Peace (Tiananmen Gate) | Gate of Uprightness | Meridian Gate | Golden River Bridges | Gate of Supreme Harmony | Terrace to Hall of Supreme Harmony (hidden by clouds)

THE FORBIDDEN CITY

For nearly 500 years, from the early 15th century to the early 20th, 24 emperors of the Ming and Qing dynasties ruled China from a sweeping palace complex at the heart of Beijing. Built like a treasure box of walls within walls, the Forbidden City was a cloistered imperial residence, a scene of ceremonial grandeur, and also the bustling apex of China's vast and intricate bureaucracy. Every detail in this precise maze of crimson walls and yellow tile roofs—the imperial colors—made the Forbidden City (Zijincheng, in Chinese) a reflection of the emperor's heavenly mandate to preserve harmony and hierarchy.

紫

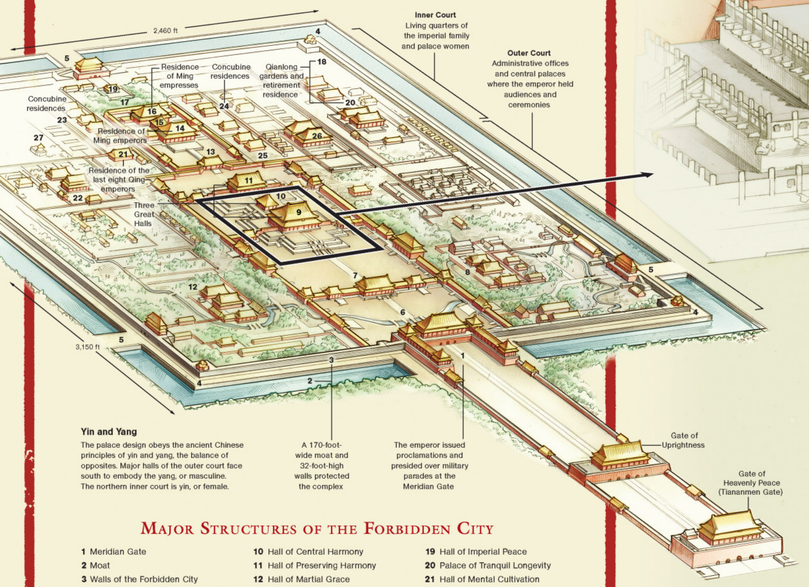
ZI–PURPLE Color of the North Star in Chinese tradition; the polestar symbolized the emperor as the center of all under heaven.

禁

JIN–FORBIDDEN Commoners were not allowed to enter.

城

CHENG–CITY The world's largest palace complex, it housed 10,000 people at the peak of the Qing dynasty.



Yin and Yang
The palace design obeys the ancient Chinese principles of yin and yang, the balance of opposites. Major halls of the outer court face south to embody the yang, or masculine. The northern inner court is yin, or female.

MAJOR STRUCTURES OF THE FORBIDDEN CITY

1 Meridian Gate
2 Moat
3 Walls of the Forbidden City
4 Watchtowers
5 West, East, and North Gates

Outer Court (ceremonial and administrative quarters)
6 Golden River Bridges
7 Gate of Supreme Harmony
8 Hall of Literary Glory
9 Hall of Supreme Harmony
10 Hall of Central Harmony
11 Hall of Preserving Harmony
12 Hall of Martial Grace

Inner Court (domestic quarters)
13 Gate of Heavenly Purity
14 Palace of Heavenly Purity
15 Hall of Union
16 Palace of Earthly Tranquillity
17 Imperial Garden
18 Qianlong's Garden
19 Hall of Imperial Peace
20 Palace of Tranquil Longevity
21 Hall of Mental Cultivation
22 Palace of Compassion and Tranquillity
23 Six West Palaces
24 Six East Palaces
25 Hall of Abstinence
26 Hall for Worshipping Ancestors
27 Pavilion of the Rain of Flowers

NATIONAL GEOGRAPHIC
SUPPLEMENT TO NATIONAL GEOGRAPHIC MAGAZINE, MAY 2006
DESIGN: JUAN VELASCO **ART:** BRUCE MORSER **TEXT:** JUAN VELASCO AND JANE VESSELS **RESEARCH:** SHELLEY SPERRY
PRODUCTION: MOLLY SNOWBERGER **CONSULTANTS:** WANG SHIWEI, FORBIDDEN CITY RESTORATION OFFICE; LISA CLAYPOOL, REED COLLEGE

CONSTRUCTION, 1406-1420

A declaration of power by the young Ming dynasty, the Forbidden City followed 1,500-year-old tenets of city planning dictated by a classic Confucian text. Only in a properly ordered capital could an emperor be the mediator of cosmic balance between heaven and earth. Fire was a constant threat to the timber-framed brick buildings and gates. Soon after completion, the three central great halls burned to ash and were not reconstructed until 1440. Parts of the complex burned and were rebuilt at least eight times during the Qing dynasty, the last time in 1888.

Hall of Supreme Harmony
The grandest palace in the complex, elevated on a three-tiered marble terrace, it held nothing but the emperor's most elaborate throne. The hall was generally reserved for paramount rituals: New Year celebrations, enthronements, the emperor's birthday, and royal weddings.

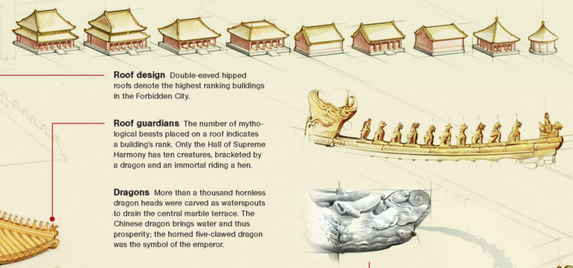
The Dragon Throne
Wearing a crown of red silk and sable, the emperor surveyed ceremonies from a gilded throne carved in the shape of entwined dragons.

Intricately painted exposed beams connect 72 columns nearly 50 feet tall.

Incense of sandalwood and pine rose from heavy copper stoves and from burners in the shape of cranes paired with tortoises, symbols of longevity.

Singers chanted, and an orchestra played bells and stone chimes.

Red characters on the awning wished the newlyweds *shuangxi* (double happiness).



Roof design Double-eaved hipped roofs denote the highest ranking buildings in the Forbidden City.

Roof guardians The number of mythological beasts placed on a roof indicates a building's rank. Only the Hall of Supreme Harmony has ten creatures, bracketed by a dragon and an immortal riding a hen.

Dragons More than a thousand hornless dragon heads were carved as waterspouts to drain the central marble terrace. The Chinese dragon brings water and thus prosperity; the horned five-clawed dragon was the symbol of the emperor.

WEDDING CELEBRATION OF THE GUANGXU EMPEROR, 1889

More than 500 imperial officials and male family members gathered at the Hall of Supreme Harmony in March 1889 for the ritual of announcing the marriage of the emperor. The nuptials of Guangxu and empress Longyu had been held three days earlier in the intimate Palace of Earthly Tranquillity. Empress Dowager Cixi dictated the choice of bride; the woman Guangxu had wanted to marry would instead become one of his concubines. This was the twilight of the Qing dynasty—an imperial wedding was never celebrated so lavishly again.

Ritual Rank
Offering the emperor their wedding respects, princes and nobility gather on the terrace close to the throne. The vast courtyard had filled before dawn as civil and military officials, orchestrated by the powerful Ministry of Rites, marched into the Forbidden City by lantern light. They took marked positions according to their rank. When the masters of ceremonies cracked their whips and shouted "Kowtow," everyone not holding a banner, parasol, or circular fan fell to their knees. They performed three sequences of three prostrations, each time knocking their heads three times against the stone.

The Imperial Way
Covered with wool carpet for the ceremony, a narrow marble path called the Imperial Way ran more than half a mile from the emperor's throne to Tiananmen Gate. Only the emperor could walk on this path; more commonly he was carried over it in a sedan chair. The ritual announcing the emperor's wedding concluded with members of the Ministry of Rites walking alongside the path to bring a written proclamation of the marriage to Tiananmen Gate, where it was read to the public. Details of the many rituals conducted for Guangxu's wedding are known from an album of paintings commissioned for the event.

ART TREASURES

Scholar and patron of the arts, the Qing dynasty emperor Qianlong sat for this 1736 portrait (right) by court painter Giuseppe Castiglione, one of the Jesuits he invited into the Forbidden City to share their talent and intellect, though not their faith. (Qianlong favored Tibetan Buddhism.) He expanded the imperial trove of art, books, and cultural relics, which eventually numbered 1.5 million pieces.

In 1933, as a Japanese invasion loomed, the collection was divided and sent away from Beijing, surviving a cross-country odyssey during WWII and civil war. Part of the collection then went to Taiwan with nationalists defeated by Mao and is displayed in Taipei's National Palace Museum.


EMPEROR QIANLONG (REIGNED 1736–1795), PALACE MUSEUM, BEIJING




EMPEROR YONGLE (REIGNED 1403–1424), NATIONAL PALACE MUSEUM, TAIPEI

STATUETTE OF EUNUCH, PALACE MUSEUM, BEIJING


EMPRESS DOWAGER CIXI (BORN 1835), FOGG ART MUSEUM, HARVARD UNIVERSITY


EMPEROR PUYI (REIGNED 1909–1912), PALACE MUSEUM, BEIJING


MAO ZEDONG ON TIANANMEN GATE. PHOTO: GOH CHAI HIN, AFP/GETTY IMAGES

MING DYNASTY 1368–1644

1403 Third emperor of the Ming dynasty, Yongle (left) decides to move the capital from Nanjing to Beijing, in part to counter threats from the north by the Mongols. Their Yuan dynasty had been overthrown by his father, the first Ming ruler.

1406-1420 Yongle erects the Forbidden City in the same spot where Kublai Khan, grandson of Genghis Khan and first emperor of the Mongol Yuan dynasty, had established his own imperial palace (extolled by Marco Polo) in 1267.

The Forbidden City's male servants were eunuchs (right), men from poor families who chose castration in exchange for the opportunities of court life. They were the only adult males, aside from the emperor, allowed to remain in the inner court at night.

Corruption and apathy fueled the Ming dynasty's decline, setting off power struggles between officials and court eunuchs who had gained influence. Wanli, who reigned 1573-1620, refused to see his ministers or read official papers for nearly 20 years.

1644 The last Ming emperor hangs himself as rebels seize Beijing. Manchu troops, making their own incursion from Manchuria, are asked to protect the city. Instead they conquer China, starting the Qing dynasty.

QING DYNASTY 1644-1912

The long Qing reigns of Kangxi (1661-1722) and his grandson Qianlong (1736-1796) reinvigorate the court with artistry, scholarship, and efficient administration, tempering resentment that Manchus were ruling the majority Han Chinese.

1861-1908 The Empress Dowager Cixi (left), once a fifth-rank concubine, was the de facto ruler of China for 47 years. Her extravagance, refusal to modernize, and inability to stand up to foreign powers mark the waning of the Qing dynasty.

1912 The last emperor, Puyi (right), abdicates at age six as an anti-imperial revolution launches the Republic of China. Puyi is permitted to live in the inner court until 1924. In 1925 the Forbidden City opens to the public as the Palace Museum.

REPUBLIC OF CHINA (MAINLAND) 1912-1949

1949 Atop the Forbidden City's Tiananmen Gate, Mao proclaims the People's Republic of China.

1987 The Forbidden City is named a World Heritage site.

2005 An extensive 16-year restoration project starts.

PEOPLE'S REPUBLIC OF CHINA 1949-PRESENT

TALKING EXPLORES HISTORY. DOING REWRITES IT.



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The question isn't how do you reach your goal,

it's who do you follow?

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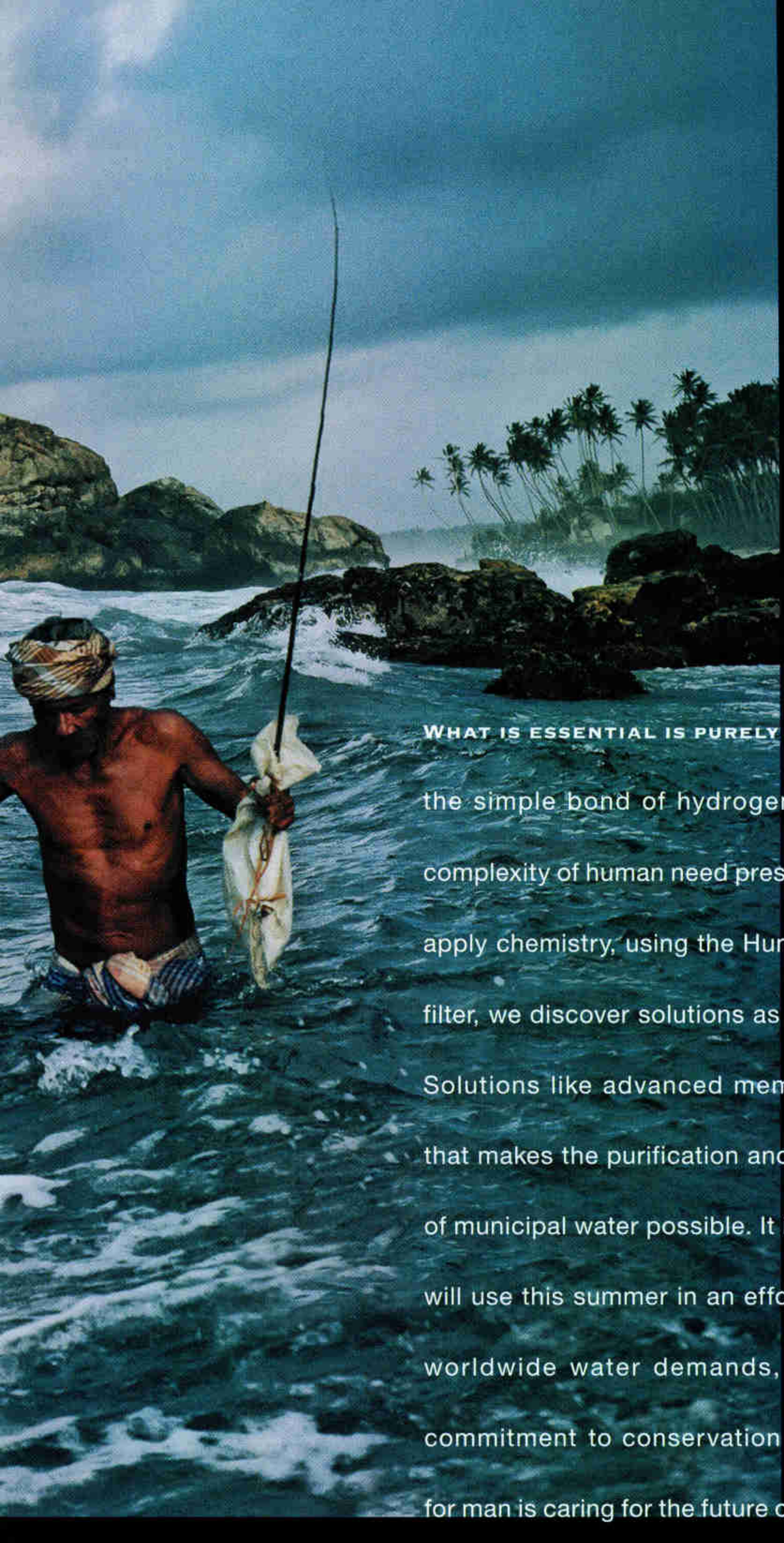
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By Peter Hessler Photographs by Fritz Hoffmann

Special Supplement: China/Forbidden City



FRITZ HOFFMANN

With a borrowed robe and faltering courage, tourist Sha Mengxiang poses for a yak-back portrait at China's Qinghai Lake.

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Rocketing Ahead

Losing Land to Sand

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Viewed From Above
Photographer George Steinmetz flew in motorized gliders (and crashed more than once) to capture images of China. See a gallery of his aerial pictures.

The People's Pictures
Readers' photos of China—and Chinatowns—are showcased.

On the Cover

The Chinese jade dragon, shown actual size, is about 2,500 years old. *Photo by Robb Harrell, Freer Gallery of Art, Smithsonian Institution*

Cover printed on recycled-content paper

Throughout the Issue
This first symbol of the Chinese I Ching system of divination is associated with strength, creativity, and the fourth lunar month.

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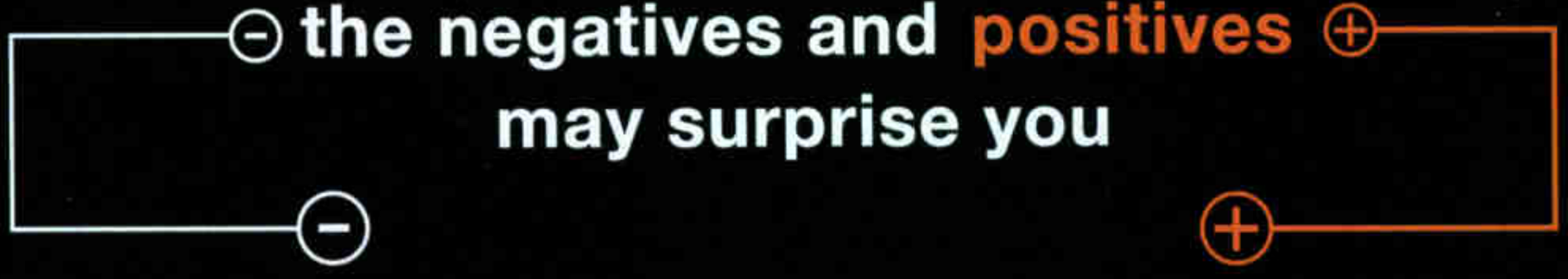
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EDITOR'S NOTE

I'm in a Beijing *hutong*—a narrow alley in the old city—playing Ping-Pong with a monk. It is 1985, and I'm on a photographic assignment for this magazine. Though many Chinese are afraid to be seen with a foreigner, the monk doesn't care and invites other monks to join us. It is the best experience I've had in three months. That night I take a small, dilapidated taxi to the Beijing Hotel, one of the few places where foreigners can stay. It's 8:30; the streets are dark and deserted. The few cars on the road aren't using their headlights, I'm told, because the drivers don't want to burn out the bulbs.



Cars now fill Beijing highways both day and night.

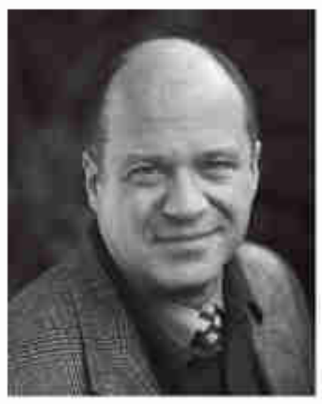
Twenty-two years later I'm in front of the Beijing Hotel at 8:30 at night. The driver of a sleek new Audi taxi pulls up with headlights blazing; he doesn't seem concerned about burning out a bulb. The city pulses with life. It's washed in light and jammed with traffic. An attractive Chinese woman approaches a number of men, then comes to me, asking if I need a massage. I don't need a massage; I need a map—something to help me understand the cataclysmic changes of the past few decades.

China can overwhelm. The shock waves of its growth reverberate in every corner of the globe. That's what this issue is—a map to help readers navigate the terrain of exuberance and anxiety that is China today.

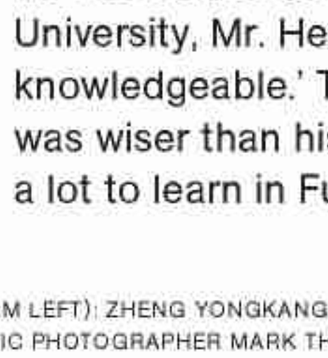


PEOPLE BEHIND THE STORIES

■ **Ted C. Fishman** While writing "The New Great Walls" for this issue, Fishman was struck by how "China today has, for architects and young foreigners in business, some of the qualities that Paris had in the 1920s for writers and artists. New forms and experiments flower daily. Of course, in Beijing, as in Paris, not everyone is a master creator. In China, where intellectual-property standards are still evolving, I met some architects who have had whole buildings copied. I ran into the same issue on a smaller scale—when I met readers who had purchased a pirated edition of my book, *China, Inc.*, in the street stalls of Beijing."



■ **Peter Hessler** A frequent contributor to this magazine, Hessler was the primary consultant for this special issue and wrote the opening and closing articles. A decade ago he was a volunteer in China. "The lessons you learn in the Peace Corps are often more useful than those you learn in college," he says, "and my two years in Fuling represented the most important educational experience I ever had. During my initial semester teaching there, one student wrote a description of me: 'Though he was educated at Oxford University, Mr. Hessler is very knowledgeable.' That student was wiser than his years. I had a lot to learn in Fuling."



PHOTOS (CLOCKWISE FROM LEFT): ZHENG YONGKANG, CHINAPHOTOWORLD; NATIONAL GEOGRAPHIC PHOTOGRAPHER MARK THIESSEN; MARK LEONG

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MAP: Martin S. Waiz

Sources:

"The Value of Honey Bees As Pollinators of U.S. Crops in 2000," Cornell University; CRS Report for Congress "Recent Honey Bee Colony Declines"

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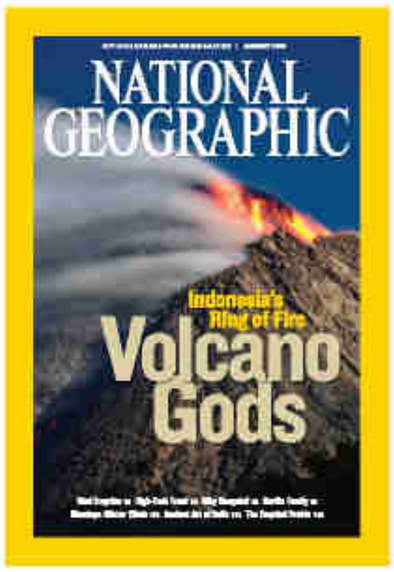
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LETTERS



January 2008 *"The Emptied Prairie" filled the mailbox this month as many readers took issue with our story on rural North Dakota. "Could Charles Bowden now do a follow-up on the beauty and the wonder of said state?" wrote Eileen Regi of Shade Gap, Pennsylvania. "Come on, redo your hard, harsh story and find the good things. I go back every chance I get."*

Comment on May stories at **ngm.com.**

The Emptied Prairie

Our North Dakota prairies are far from empty. Our ancestors were committed to thriving here, and so are we. When I look out on the vast land my husband's great-grandfather broke by hand and horse-drawn plow more than 125 years ago, I am honored to be preserving it for our children. We chose to move from a larger city to this rural homestead only months ago. I see something far different than the dismal picture painted in your article. I am filled with gratitude for those who passed by here before me and built the buildings that are admittedly in a state of disrepair. I see beauty in those buildings and have an unbridled appreciation for the rich history they represent. We are not alone here. Granted, the distance between neighbors has grown through the years, but there is a community in North Dakota unlike any other. Until you have lived here, I don't think you can fully understand the bond that runs through each and every one of us.

DORIS COOPER
Reynolds, North Dakota

The article correctly presented the slow loss of rural population in North Dakota, but also presented the state as a cold, lifeless place that no one would want to live in. Nothing could be further from the truth. As a transplanted Nebraskan, I love the quality of life this state and its people provide. Author Charles Bowden says that North Dakota is a "rarely visited state," yet tourism is also a vital part of our economy. Witness the thousands who come here to see North Dakota's badlands, prairies, and other scenic wonders. Thousands more come to fish our lakes and rivers and hunt waterfowl and upland game.

DAVID LINDEE
Minot, North Dakota

The changing landscape of the Great Plains is hardly newsworthy. It is true that there is a population shift. However, I believe the facts show that the population decline has stabilized. Many of these same shifts in population from rural areas to urban cities can also be observed in Iowa, Illinois, and Minnesota. This isn't happening just in North Dakota, but across the country.

DARBY G. BAUER
Urbandale, Iowa

There has been a lot of angry talk here about your article on the dying towns of North Dakota. I have lived here for almost 30 years, and I have to tell you that you got the story right. There is a stark and haunting beauty about this part of the world, but to try and make a living outside of the cities is a cruel undertaking. People are so loyal to this place that they are very hesitant to find fault or admit that the high-water mark for the economies of these communities was long ago, never to return.

RAY WERTZ
Bismarck, North Dakota

What you left out is the fact that North Dakota has a growing economy, well-educated citizens, low crime, great infrastructure, and one of the cleanest environments in America. There is certainly growth and opportunity in North Dakota these days, but more importantly, there is a mood of optimism across the land. We are working hard to take our efforts to the next level, and an article that showcases the spirit, inventiveness, and progress we're making would certainly be in order. I encourage you to take a broader look at our state and help us convey to the world what North Dakotans already know: that North Dakota is a great place in which to live, work, visit, study, have fun, and do business.

JOHN HOEVEN
Governor
Bismarck, North Dakota

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Long-beaked Echidna *(Zaglossus bruijni)*
Size: Head and body length, 60 - 100 cm (24 - 40 inches) **Weight:** 6 - 16 kg (13.2 - 35 lbs)
Habitat: Widely distributed on islands of New Guinea and Salawati, usually in areas of high rainfall
Surviving number: Unknown; populations thought to be declining

Photographed by David Parer and Elizabeth Parer-Cook

WILDLIFE AS CANON SEES IT

Think distinct. The long-beaked echidna is one of only three species of monotremes—primitive mammals that lay leathery, shell-covered eggs. Though it has hair and produces milk, some of its internal anatomy resembles that of birds and reptiles. Because the female lacks teats, she nurses her young through "milk patches" inside her pouch. The echidna also lacks teeth, but has unique backward-pointing spines on its tongue to grip its earthworm prey. External spines help keep it from becoming prey itself; when threatened, it curls its body into a prickly ball. Uncontrolled hunting remains a huge problem, however, and is making the rare creature rarer still.

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LETTERS

I have lived half of my 15 years in this beautiful state, and I felt it was depicted as if it were a Third World country. Struggling small towns and abandoned houses can be found all over the United States. This state is far from barren, even in winter. Have you ever seen a sun dog? It's something I've never seen anywhere else. It occurs when ice crystals in the air refract early morning light, creating dazzling diamond shapes of beautiful colors paralleling the sun. If our state is so barren, how did it become Teddy Roosevelt's favorite? Never discussed in the article is the national park named after him, or the badlands in the southwestern part of our state. What about the Red River Valley, which has some of the most fertile land in the country? I cannot deny the artistic ability of photographer Eugene Richards. I found the pictures captivating. The prairie truly is where the earth meets the sky; perhaps there will be a time when its stunning beauty is told of and appreciated.

RACHEL LEVY
Valley City, North Dakota

The author of the article is from Arizona. My father lives in Arizona. He has no grass in his neighborhood—only gravel and cacti. There is nothing green as far as the eye can see, from his front yard all the way to the mountains in the distance. I haven't seen other parts of Arizona, but what if I were to write an article for *National Geographic* with that limited view? The picture would be pretty bleak and very inaccurate. I feel certain that there are characters in Arizona, that there are unhappy people, and that there are also small towns that are dying in the scorching sun and parched earth. But I'll also bet there are vibrant communities, beautiful scenery, and happy, optimistic people. I didn't realize how attached to this state I was until I had read Charles Bowden's article. In a way, I have to thank him.

MONICA HANNAN
Bismarck, North Dakota

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LETTERS

The photos of the abandoned farmhouses on the desolate North Dakota prairie were a reminder of how quickly we forget the hardships our ancestors endured when they first settled in this country. My father left the state as a young man in the 1950s, though his parents stayed until their deaths. His childhood memories of farm life and 12-foot snowdrifts will live on through his stories to his grandchildren, perhaps the same as he remembers the brave tales of his own German grandfather who escaped the Russian army in the late 1800s and then went on to homestead in the vast and rocky North Dakota plain. Thank you for rekindling the stories of my own ancestry.

KAMI HINGER AUSTIN
Chandler, Arizona

It's unsurprising that the folks most angry about this article are people who live in North Dakota. For those who live there, it's difficult to understand why folks from elsewhere focus primarily on the emptiness. As someone who is proud to have grown up there, but who lives far, far away, I'm somewhat less defensive. And I don't think that the haunting loneliness described in the article is off base. Every time I go home and visit my grandma in Foxholm or family in Langdon or Bottineau, or drive the road from Minot to Bismarck, I'm struck by the vastness of the place and my smallness within it.

DAVID NETT
North Hollywood, California

For six years I have lived in the midst of all those North Dakota ghost towns featured in your article. As agricultural units have expanded and machinery has improved, families have become smaller, and there are far fewer of them. Fewer families mean fewer schools, fewer stores, and fewer of everything. The decline in our population has zero to do with harsh conditions or suicide.

SCOTT D. HANSON
Dickinson, North Dakota

High-Tech Trash

The Japanese have a recycle rate of 98 percent for paper and 96 percent for glass. How are these rates achieved? Based on my three years spent in Odawara, Japan, this reflects detailed recycling rules established by the municipal authorities coupled with a population

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that follows such rules without exception. The homeowner sorts items into eight distinct categories prior to collection. Since the day and frequency of collection is specific for each category, residents keep a color-coded calendar in the kitchen. There is a ninth category for large items such as bicycles, televisions, etc. In Odawara these are collected from home upon payment of a special fee. In some other areas there are locations where large items can be deposited. While the Japanese are averse to secondhand items, the resultant mini-mountains of consumer products always attract foreigners in search of bargains.

ROBERT J. NASH
Webster, New York

It would be nice to build here at home more "Davids" [recyling machines] and help stem the outgoing flow of electronic debris. But then I look at the photograph of 11-year-old Salman Aziz on page 81 and wonder, when his supply of old computer mice disappears, where he will go for his next bit of small change and what he will do for his next meal.

BILL STELTZER
West Grove, Pennsylvania

Throughout the entire year cardboard seems to be the highest volume material in my household waste stream. Recycling is good, but not everyone participates, and the landfills are filling up. When will one of the big retailers force their suppliers to develop a system of reusable containers that customers can use to bring their household goods home, and then return to the store or other collection point for a deposit? Far less packing material would be used, buried, wasted, and a cottage industry would spring up to guarantee that containers were returned and deposits collected.

BRIAN SMITH
Mount Airy, Maryland

Corrections, Clarifications

January 2008: Ice Warriors
The correct elevation of Annapurna is 26,502 feet.



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LETTERS

The cost of proper disposition of products containing hazardous components is supposedly prohibitive within the U.S. Why? Because consumers have not been enlightened to become responsible stewards of the products they choose. How many people know that a musical greeting card has a battery that is hazardous to the environment? Or that their TV or computer contains lead or mercury? Aside from the U.S. halting exports of toxic scrap, engagement of consumers can have an enormous impact.

LAUREN S. ROMAN
Budd Lake, New Jersey

The recycling effort needs to involve more than the consumer and the government. It needs to involve those who sell (and profit) from those products that can be recycled. For example, the manufacturers of bottles and cans, the producers of what's sold inside them, and the grocery stores that distribute them must take a greater economic role in the process of recycling. The voluntary "blue bag at the curb" approach is a good start, but it relies primarily on the altruism of the consumer. When all parties have an economic incentive to participate, recycling will make a much larger contribution toward preserving the environment.

JOE BIALEK
Cleveland, Ohio

One thing that cannot be ignored is the part played by electronics producers. In China the cost of repairs for electronics like mobile phones, MP3 players, etc., is considerably high. Customers may be charged a fee merely for the opening of a broken electronic before the repair phase actually gets started. Plus, it is very likely that the needed spare parts may already be out of production. In this case customers have very few choices but to give up their poor broken gadgets and bring new ones home. In this way lots of electronics end up deep in the old cabinets, then on to landfills. I suppose this is due to the strategy of most electronics companies: update their products and prices faster. However, this is certainly not a wise idea for the sake of resource and energy saving.

MENG SI
Beijing, China



The Gods Must Be Restless

Your story about the volcanoes in Indonesia brought back memories of my youth on Java and Sumatra. Andrew Marshall's writing shows that he understands the Indonesian mind and soul. What he wrote about the volcano gods and other mythical beliefs, I have personally seen and experienced. Mount Merapi was virtually in our backyard, and its smoking crest was visible almost every day. It was a beautiful sight indeed.

ARNOLD W. TELDERS
Salem, Oregon

In the Presence of Giants

What a captivating story of Kingo the gorilla and his family! I felt as if I were right there sitting with them. This article reminds us that they are part of our patrimony and we have to know them better and protect them. I hope this story helps in conservation efforts and funding for the Mondika Research Center. We should be their first line of defense. Are we?

HECTOR E. RIVERA
San Juan, Puerto Rico

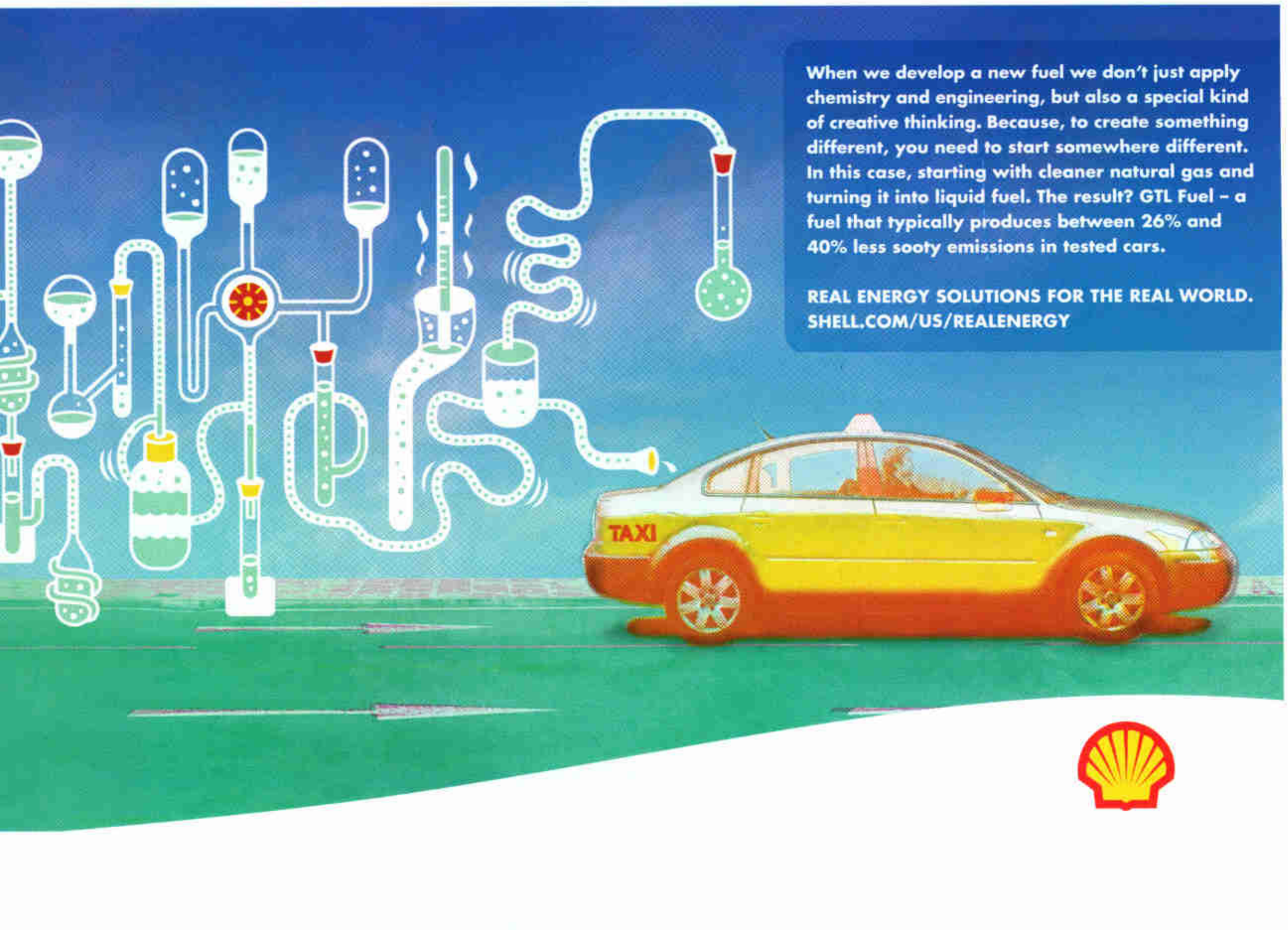
Health: Quit It

Cancer of the lung was found in an x-ray of my shoulder after an accidental fall. It was small oat cell cancer, which is usually due to smoking. I had smoked heavily over 35 years. The cancer's location indicated that it was too late for chemotherapy. The doctor decided to remove two-thirds of my left lung and five lymph nodes. Because of a wonderful support system, I was able to quit smoking in three months doing it cold turkey. I was addicted to it and still miss the arm movement, but I am still alive with no more signs of cancer.

BEVERLY HORNER
Wichita, Kansas

This article brings home our worldwide dilemma regarding nicotine addiction and its disastrous consequences. Can anyone deny that by licensing the manufacture of tobacco products, governments are telling the people that greed for taxation income is more important by far than the health of the people—the very ones they pretend to protect with "no smoking" laws?

CLAUDETTE CHADSEY
Lethbridge, Alberta



Your China Thousands responded to our call for photographs of Chinese people, places, and culture for this month's Your Shot page. Most were subscribers to our new Your Shot email newsletter, which features links to our Daily Dozen reader photos, the voting machine, and online jigsaw puzzles made from Your Shot selections—possibly even your own. Sign up for the newsletter at *ngm.com/yourshot*.



Thor Santisiri Bangkok, Thailand

"The horses just came out of nowhere," says Thor Santisiri, who is creative director of an ad agency when not dodging flying hooves. He watched the traditional Tibetan racing competition in Litang, China.



Jos Vaught Portland, Oregon

Last summer marked student Jos Vaught's first visit to China. He saw this woman in Beijing on a day "so hot even tourists seemed to lose their enthusiasm for movement."



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Aaron Thompson Wuxi, China

At a market in the Guizhou Province village of Shidong, Aaron Thompson, who teaches fifth grade at the American International School of Wuxi, snapped a bag of live ducks packaged for easy transport.

Disen Huang Jilin, China

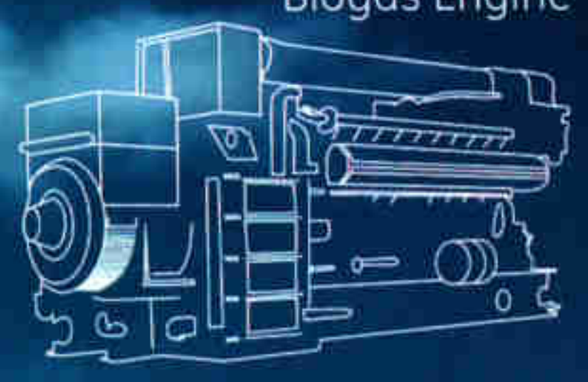
Before buying firecrackers for the local Spring Festival, 17-year-old Disen Huang took this picture of a vendor and his explosive wares. "The ban on firecrackers is lifted for about 16 days every year," explains Disen's father, Wei. "We still enjoy this tradition, which is hundreds of years old."



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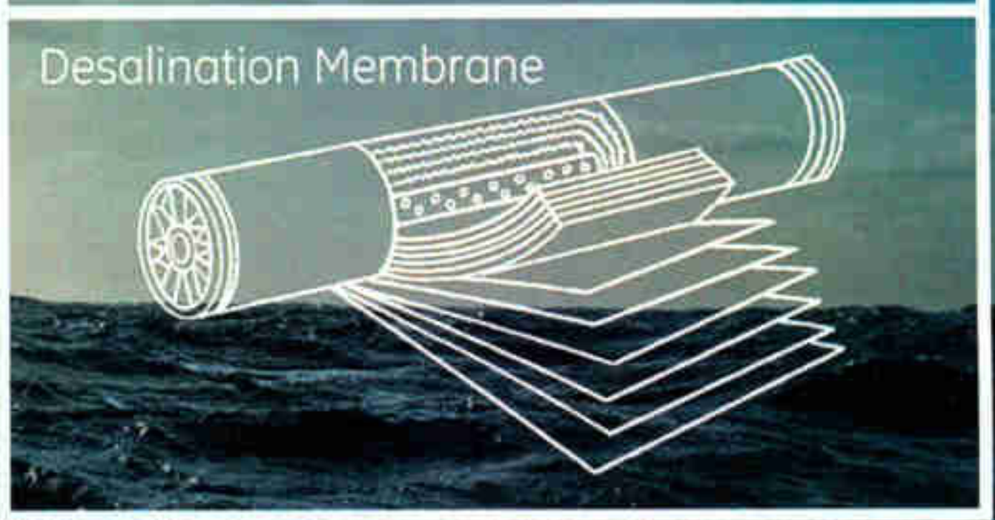


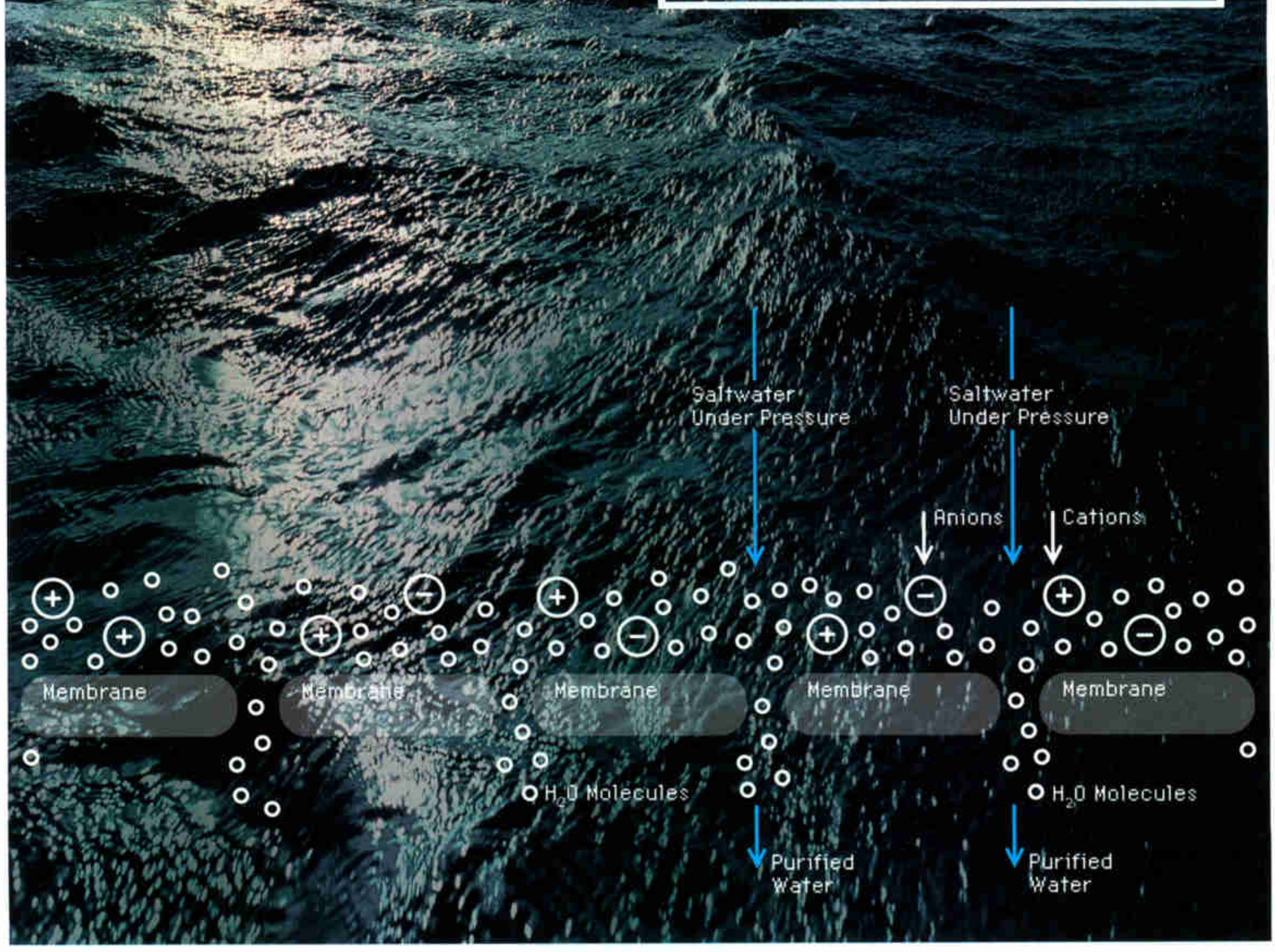
Chun Sing Johnson Cheung Hong Kong, China

A girl with flowers caught the eye of Chun Sing Johnson Cheung in rural Jiaju, Sichuan. "I work with young people every day," says the Hong Kong social worker. "Unlike kids from the 'modern world,' these village boys and girls are not obsessed with junk food or fancy toys."

Two-thirds of the world is covered in water. Shouldn't three-thirds of the world's population be able to drink it?

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Jeffrey Litsey Indianapolis, Indiana

"The other monks called this monk the 'scientist' because he was always on his cell phone or tinkering with electronics," says Jeffrey Litsey, 24, who snapped this photo on a university trip to China's Gansu Province.



Ricardo Garza Marcos Monterrey, Mexico

Snacks at a Beijing food stand didn't tempt Ricardo Garza Marcos, a 28-year-old architect. "The salesperson took a stick, grabbed a live scorpion, plunged it in boiling oil for five seconds, and ate it in just one bite."

27_000_000°F

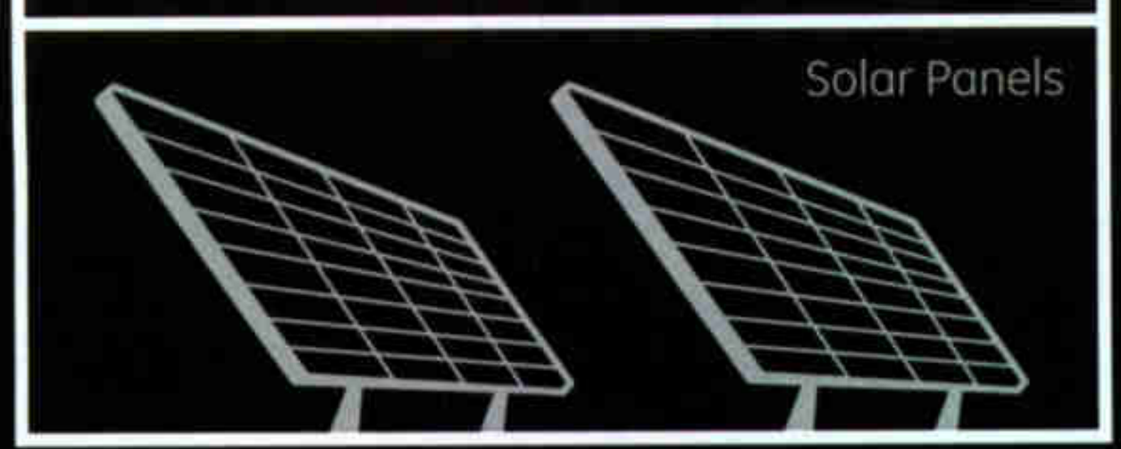
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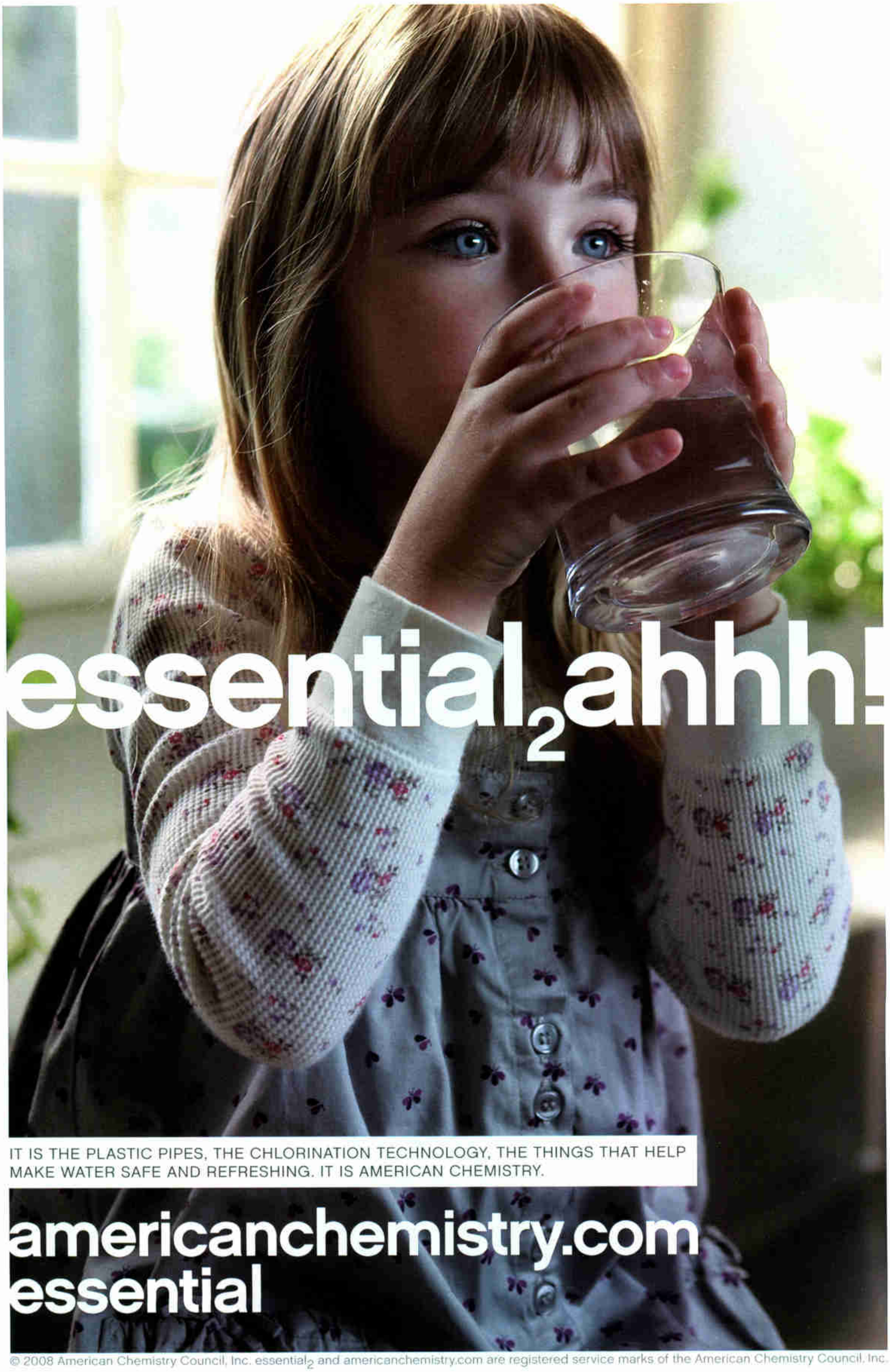
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Kathleen Nevin Nenagh, Ireland

Traditional fishermen in Dali, Yunnan, train cormorants to do their work for them. "The string tied around the neck prevents it from swallowing any but the smallest fish," explains Kathleen Nevin, who shot this while on holiday. "The fisherman takes the catch from the bird's throat and puts it on his own table."



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A Yunnan snub-nosed monkey hugs her baby. This is a captive pair; some 2,000 survive in the wild.

Xi Zhinong founded Wild China Film, China's first photo agency specializing in wildlife and the environment.

Monkeys Shine In 1995, while working for the Yunnan forestry department, photographer Xi Zhinong learned of plans to log the forest habitat of the endangered Yunnan snub-nosed monkey. He thought the public should know. Petitions were sent to national leaders, media responded, and college students camped in the monkeys' forest to draw publicity. During what was one of China's first grassroots conservation campaigns, people across the country saw Xi's photo of this pair (above) and made clear their support. Eventually the logging was stopped; the habitat was saved. Xi was let go from that forestry job. But he gained a whole new career—he's now China's preeminent wildlife photographer.

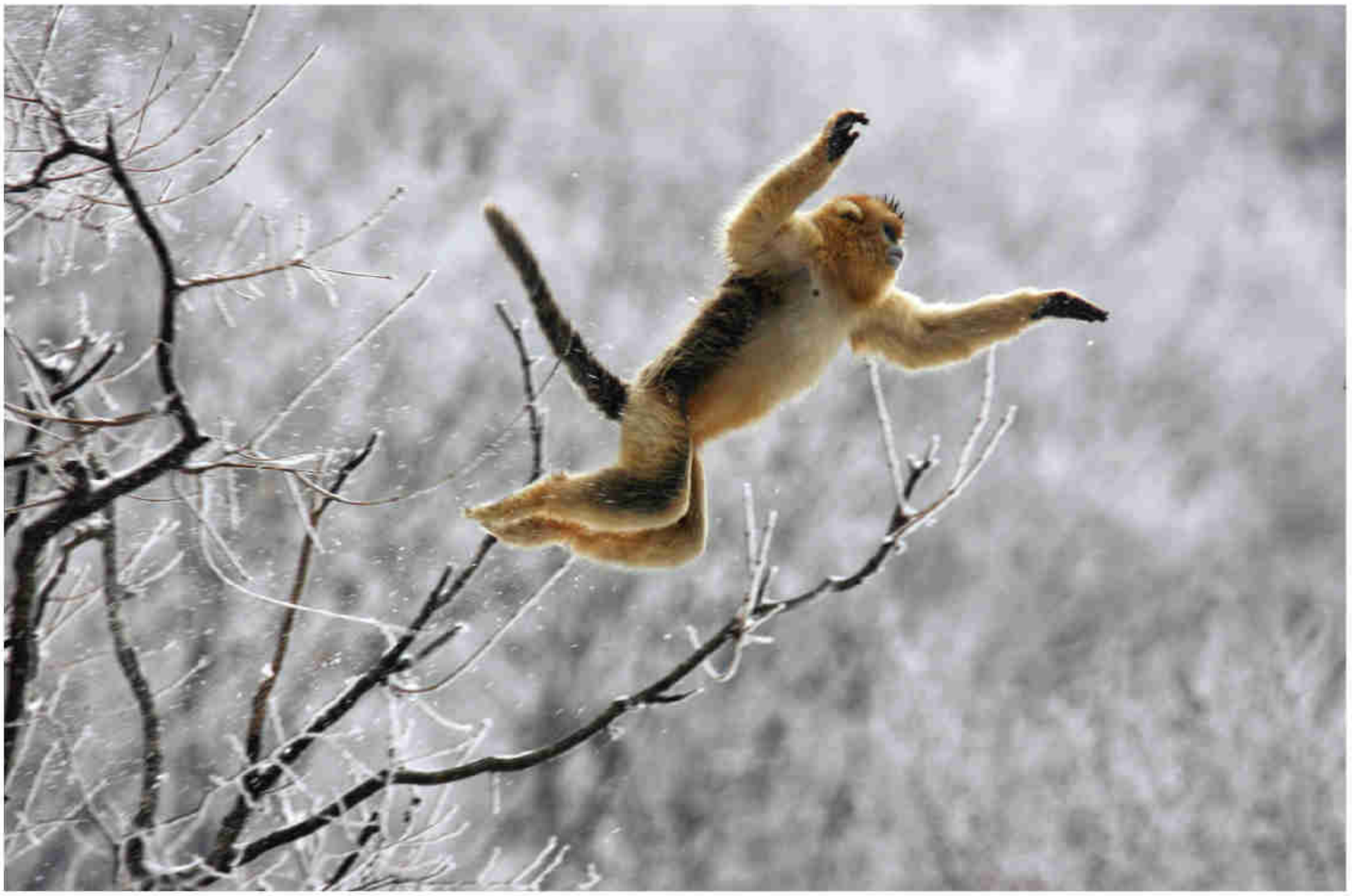
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PHOTO JOURNAL | XI ZHINONG



China is home to three snub-nosed monkey species; Xi Zhinong has photographed them all. This golden snub-nosed monkey lives in the high, cold forests of Shaanxi Province's Qinling Mountains. "I found out these monkeys have highways of their own," he says. "They always jump from one tree to another at the same spot."



Xi lives in Beijing now, but returns to Yunnan every year to photograph the snub-nosed monkeys. He sometimes waits for weeks in the wild to see even one. "Most of the time the monkeys live in the conifer forest above 4,000 meters," says Xi. "But they occasionally climb down the mountain looking for food in the broadleaves."

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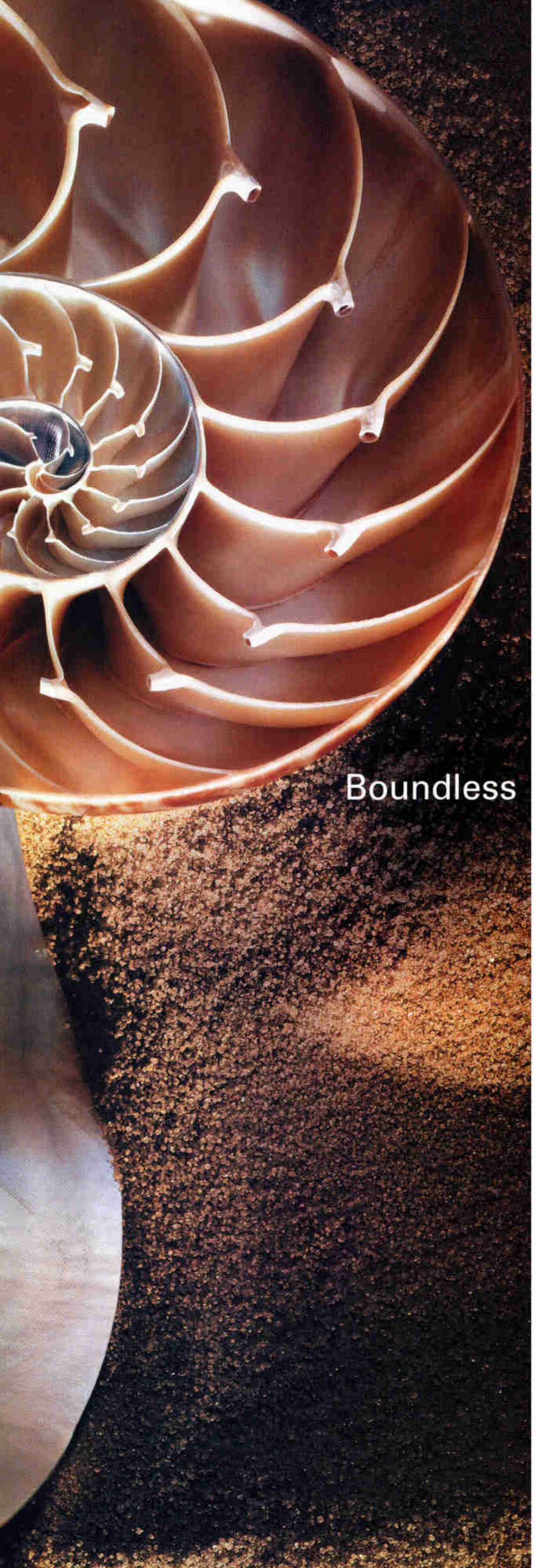


PHOTO JOURNAL | XI ZHINONG



Lichens stripped from the bark of spruce and fir trees are the main food source for the Yunnan snub-nosed monkey. Rare and rarely seen, it was thought extinct well into the 1960s. Now, more than a decade after Xi Zhinong's campaign, efforts to protect its habitat continue, though the species remains endangered.



Golden snub-nosed monkeys huddle for warmth; deep snow and bitterly cold temperatures are common across their range in winter. The golden monkeys live in Sichuan, Gansu, Hubei, and Shaanxi Provinces, often overlapping with the giant panda's habitat.

There's relief for pain like this. Ask your doctor about Lyrica®.



LYRICA® PREGABALIN capsules

Designed for Relief

Do you feel burning pain in your feet? Or tingling, numbness, stabbing or shooting sensations? If so, you may have painful neuropathy, also known as nerve pain. This type of pain is different from musculoskeletal (muscle or joint) pain, and may need a different type of treatment. Only Lyrica (pronounced LEER-i-kah) is FDA-approved to treat two of the most common types of nerve pain, Diabetic Nerve Pain and Pain after Shingles. Lyrica is specially designed to provide the relief you need. It works on the nerves that cause this pain. So you can start to think about other things besides your pain. Ask your doctor if Lyrica can help. Lyrica is one of several treatment options for you and your doctor to consider.

Prescription Lyrica is not for everyone. Tell your doctor right away about any serious allergic reaction that causes swelling of the face, mouth, lips, gums, tongue or neck or affects your breathing or your skin. Also tell your doctor about any changes in your eyesight, including blurry vision, muscle pain along with a fever or tired feeling, skin sores due to diabetes or if you are planning to father a child. Some of the most common side effects of Lyrica are dizziness and sleepiness. Others are weight gain, blurry vision, dry mouth, feeling "high," swelling of hands and feet and trouble concentrating. You may have a higher chance of swelling, hives or gaining weight if you are also taking certain diabetes or high blood pressure medicines. Do not drive or operate machinery until you know how Lyrica affects you. Do not drink alcohol while taking Lyrica. Be especially careful about medicines that make you sleepy. If you have had a drug or alcohol problem, you may be more likely to misuse Lyrica. Talk with your doctor before you stop taking Lyrica or any other prescription medication.

Please see important patient information on adjacent pages.

To learn more visit www.lyrica.com or call toll-free 1-888-9-LYRICA (1-888-959-7422).

You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.FDA.gov/medwatch or call 1-800-FDA-1088.

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PATIENT INFORMATION

Lyrica® *(pregabalin)* Capsules Ⓒ
(LEER-i-kah)

Read the Patient Information that comes with LYRICA before you start taking it and each time you get a refill. There may be new information. This leaflet does not take the place of talking with your doctor about your condition or treatment. If you have any questions about LYRICA, ask your doctor or pharmacist.

What is the most important information I should know about LYRICA?

1. **LYRICA may cause serious allergic reactions.**
 - **Call your doctor right away if you think you have any of the following symptoms of a serious allergic reaction:**
 - **swelling of the face, mouth, lips, gums, tongue or neck**
 - **have any trouble breathing**
 - **Other allergic reactions may include rash, hives and blisters.**
2. **LYRICA may cause dizziness and sleepiness.**
 - **Do not drive a car, work with machines, or do other dangerous activities until you know how LYRICA affects how alert you are. Ask your doctor when it is okay to do these activities.**
3. **LYRICA may cause problems with your eyesight, including blurry vision.**
 - **Call your doctor if you have any changes in your eyesight.**

What is LYRICA?

LYRICA is a prescription medicine used in adults, 18 years and older, to treat:

- pain from damaged nerves (neuropathic pain) that happens with diabetes
- pain from damaged nerves (neuropathic pain) that follows healing of shingles (a painful rash that comes after a herpes zoster infection)
- partial seizures when taken together with other seizure medicines
- fibromyalgia

LYRICA has not been studied in children under 18 years of age.

Pain from Damaged Nerves (neuropathic pain)

Diabetes and shingles can damage your nerves. Pain from damaged nerves may feel sharp, burning, tingling, shooting, or numb. If you have diabetes, the pain can be in your arms, hands, fingers, legs, feet, or toes. If you have shingles, the pain is in the area of your rash. You may experience this kind of pain even with a very light touch. LYRICA can help relieve the pain. Some people taking LYRICA had less pain by the end of the first week of LYRICA therapy. LYRICA may not work for everyone.

Partial Seizures

Partial seizures start in one part of the brain. A seizure can make you fearful, confused, or just feel "funny". You may smell strange smells. A seizure may cause your arm or leg to jerk or shake. It can spread to other parts of your brain, make you pass out, and cause your whole body to start jerking.

LYRICA can lower the number of seizures for people who are already taking seizure medicine.

Fibromyalgia

Fibromyalgia is a condition which includes widespread muscle pain and difficulty performing daily activities. LYRICA can help relieve the pain and improve function. Some people taking LYRICA had less pain by the end of the first week of LYRICA therapy. LYRICA may not work for everyone.

Who Should Not Take LYRICA?

Do not take LYRICA if you are allergic to any of its ingredients. The active ingredient is pregabalin. See the end of this leaflet for a complete list of ingredients in LYRICA.

What should I tell my doctor before taking LYRICA?

Tell your doctor about all your medical conditions, including if you:

- **have any kidney problems or get kidney dialysis**
- **have heart problems including heart failure**
- **have a bleeding problem or a low blood platelet count**
- **are pregnant or plan to become pregnant.** It is not known if LYRICA may harm your unborn baby. You and your doctor will have to decide if LYRICA is right for you while you are pregnant.
- **are breastfeeding.** It is not known if LYRICA passes into breast milk and if it can harm your baby. You and your doctor should decide whether you should take LYRICA or breastfeed, but not both.

Tell your doctor about all the medicines you take including prescription or non-prescription medicines, vitamins or herbal supplements. LYRICA and other medicines may affect each other. Especially tell your doctor if you take:

- angiotensin converting enzyme (ACE) inhibitors. You may have a higher chance for swelling and hives if these medicines are taken with LYRICA. See "What is the most important information I should know about LYRICA?"
- Avandia® (rosiglitazone) or Actos® (pioglitazone) for diabetes. You may have a higher chance of weight gain or swelling if these medicines are taken with LYRICA. See "What are the possible side effects of LYRICA."
- any narcotic pain medicine (such as oxycodone), tranquilizers or medicines for anxiety (such as lorazepam). You may have a higher chance for dizziness and sleepiness if these medicines are taken with LYRICA. See "What is the most important information I should know about LYRICA?"
- any medicines that make you sleepy

Know all the medicines you take. Keep a list of them with you to show your doctor and pharmacist each time you get a new medicine.

Tell your doctor if you plan to father a child. Animal studies showed that pregabalin, the active ingredient in LYRICA, made male animals less fertile and caused sperm abnormalities. Also, *in animal studies, birth* defects occurred in the offspring of male animals who

were treated with pregabalin. It is not known if these effects would happen in people.

How should I take LYRICA?

- Take LYRICA exactly as prescribed. Your doctor may adjust your dose during treatment. Do not change your dose without talking to your doctor.
- Do not stop taking LYRICA suddenly without talking to your doctor. If you stop taking LYRICA suddenly, you may have headaches, nausea, diarrhea or trouble sleeping. Talk with your doctor about how to slowly stop LYRICA.
- LYRICA is usually taken 2 or 3 times a day, depending on your medical condition. Your doctor will tell you how much LYRICA to take and when to take it. Take LYRICA at the same times each day.
- LYRICA may be taken with or without food.
- If you miss a dose by a few hours, take it as soon as you remember. If it is close to your next dose, just take LYRICA at your next regular time. **Do not** take two doses at the same time.
- If you take too much LYRICA, call your doctor or poison control center or go to the nearest emergency room right away.

What Should I Avoid While Taking LYRICA?

- **Do not drive a car, work with machines, or do other dangerous activities until you know how LYRICA affects how alert you are.** See "What is the most important information I should know about LYRICA?"
- **Do not drink alcohol while taking LYRICA.** LYRICA and alcohol can affect each other and increase side effects such as sleepiness and dizziness. This can be dangerous.

Do not take other medicines without talking to your doctor. Other medicines include prescription and non-prescription medicines, vitamins, and herbal supplements. LYRICA and other medicines may affect each other and increase the side effects of swelling, sleepiness and dizziness. Be especially careful about medicines that make you sleepy (such as sleeping pills, anxiety medicines, tranquilizers and some antihistamines, pain relievers and seizure medicines).

What are the possible side effects of LYRICA?
LYRICA may cause side effects including:

- **allergic reactions.** See "What is the most important information I should know about LYRICA?"
- **weight gain and swelling of the hands and feet (edema).** Weight gain may affect the management of diabetes. Weight gain and swelling can also be a serious problem for people with heart problems.
- **dizziness and sleepiness.** See "What is the most important information I should know about LYRICA?"
- **eyesight problems.** See "What is the most important information I should know about LYRICA?"
- **unexplained muscle problems, such as muscle pain, soreness, or weakness.** If you develop these symptoms, especially if you also feel sick and have a fever, tell your doctor right away.

The most common side effects of LYRICA are:

- dizziness
- blurry vision
- weight gain
- sleepiness
- trouble concentrating
- swelling of hands and feet
- dry mouth

LYRICA caused skin sores in animals. Although skin sores were not seen in studies in people, if you have diabetes, you should pay extra attention to your skin while taking LYRICA and tell your doctor of any sores or skin problems.

LYRICA may cause some people to feel "high." Tell your doctor, if you have abused prescription medicines, street drugs, or alcohol in the past.

Tell your doctor about any side effect that bothers you or that does not go away.

These are not all the side effects of LYRICA. For more information, ask your doctor or pharmacist.

How should I store LYRICA?

- Store LYRICA at room temperature, 59 to 86° F (15 to 30° C) in its original package.
- Safely throw away LYRICA that is out of date or no longer needed.
- **Keep LYRICA and all medicines out of the reach of children.**

General information about LYRICA

Medicines are sometimes prescribed for conditions other than those listed in patient information leaflets. Do not use LYRICA for a condition for which it was not prescribed. Do not give LYRICA to other people, even if they have the same symptoms you have. It may harm them.

This leaflet summarizes the most important information about LYRICA. If you would like more information, talk with your doctor. You can ask your doctor or pharmacist for information about LYRICA that is written for health professionals.

You can also visit the LYRICA website at www.LYRICA.com or call 1-866-4LYRICA.

What are the ingredients In LYRICA?
Active ingredient: pregabalin

Inactive ingredients: lactose monohydrate, cornstarch, talc;

Capsule shell: gelatin and titanium dioxide; Orange capsule shell: red iron oxide; White capsule shell: sodium lauryl sulfate, colloidal silicon dioxide. Colloidal silicon dioxide is a manufacturing aid that may or may not be present in the capsule shells.

Imprinting ink: shellac, black iron oxide, propylene glycol, potassium hydroxide.

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June 2007



Yunnan Blooming rapeseed plants weave around hills near Luoping. China grows more of the crop—some 14 million tons in 2006—than any other country; officials hope a biodiesel boom will increase demand even more.

PHOTO: GEORGE STEINMETZ



Yunnan The Songzanlin Monastery overlooks the town known until 2001 as Zhongdian, but renamed—to attract more visitors—Shangri-La. Tourists, largely from within China, bring billions of dollars to Yunnan every year.

PHOTO: GEORGE STEINMETZ



Xinjiang A column of dunes could provide geologic data for sand-sampling scientists, whose trucks scratch tracks across the wind-scoured Kumtag Desert.



See more Visions of Earth images at **visionsofearth.ngm.com.**

PHOTO: GEORGE STEINMETZ



You can't solve the climate crisis

It's too big for one person to solve. It's going to take all of us, working together. The good news is, the solutions already exist. But the only way we're going to get them is by sending a powerful message to our corporations and our government. More than a million people, from all walks of life and across the political spectrum, have already come together to make their voices heard. Now we need you. Take one minute to join us at wecansolveit.org. Because you can't solve the climate crisis on your own.

But together we can.



City Digs China's future is bright. So is its past. Nowhere is the link more evident than in big cities, where bulldozers are clearing the way for skyscrapers and digging up ancient sites in the process. In 2001 workers in Jinsha, a suburb of the fast-growing city of Chengdu, stumbled upon a treasure trove: thousands of relics—from gold headwear and jewelry to elephant tusks used in religious rituals—dating back 3,000 years to the Shu kingdom. Beijing's Olympic sites have also yielded major finds, including hundreds of tombs and artifacts. The oldest are from the Han dynasty, some 2,000 years ago.

But the rush to modernize can come with a hefty historical price tag. Construction crews, failing to notify experts, have illegally destroyed sites; looting is a constant problem. That may be changing. Archaeology is a growing discipline in China, and Jinsha has opened a state-financed museum to display the bounty. Meaning what's old is once again new.

—Shamus Sillar



A gold mask (top) and a grave chamber (left) are among the big finds in Jinsha.



PHOTOS: AP IMAGES/XINHUA (TOP); LIU JIN, AFP/GETTY IMAGES. NGM MAPS

AARP: Founded on the simple premise that no one should have to live in a chicken coop.

In 1947 on a meager pension, it was all one retired teacher could afford.

That's when Dr. Ethel Percy Andrus, a retired high school principal, made a shocking discovery. On a visit to a former teacher, she found the woman living in an old chicken coop, in poor health and unable to afford medical care.

Ethel got mad. She also got organized. After helping that first teacher, she turned her efforts to helping others with a campaign to obtain affordable health insurance for retired teachers. Over 40 companies turned her down, but she persevered and eventually succeeded. She soon discovered that many other older people needed help as well, and in 1958, she founded AARP.

Today as the nation's leading membership organization — with nearly 40 million members — AARP remains committed to championing the needs of our members and the future of every generation.

We do this by focusing on the five things every generation shares:

- The need for health
- The need for financial security
- The need for community
- The need to give back to society
- The need to enjoy life

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AARP, the nonprofit parent, is a strong nonpartisan advocate for consumer rights and provides trusted information with our publications, voter education guides, research and a website that cover the issues our members care about most.

The AARP Foundation is the charitable arm of AARP. It provides services to both members and nonmembers — especially the most vulnerable in society. The Foundation delivers direct services such as the nation's largest free, volunteer-run tax assistance program and legal advocacy work to support the rights of older Americans across the country.

Finally, AARP Services, Inc. makes available products and services designed specifically for the 50+ consumer — many of whom might otherwise be excluded from the market. AARP Services does this by working with leading businesses to identify and respond to the ever-changing needs of Americans as they age. These relationships not only help shape the marketplace, but also earn revenue that helps AARP achieve its mission of leading positive social change and delivering value to members.

When she founded AARP 50 years ago, Ethel proclaimed that "an army of useful citizens" can do what no one person can. Today we at AARP champion her dream and serve all generations through vigorous action and by never forgetting the one act of compassion that started it all.

Learn more about AARP's history and our continuing mission at aarp.org/champion.



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Gaming Names

Did you hear about the Chinese parents who wanted to name their baby @? That's no joke, but it was apparently a no-go with the authorities. The urge to experiment with given names is understandable in a country where 93 million people have the family name Wang. As the State Language Commission puts it: There's an "increasingly adventurous approach to Chinese, as commercialization and the Internet break down conventions." The number of bold namers is tiny, and their efforts are often nixed. Possible reasons: Unfamiliar characters are confusing or require fonts that police computers lack. No one can stop citizens from taking English nicknames, and many do: Window, Crosseye, and Morning Goo are but a few. *—Shamus Sillar*

Baby 1A, Meet Baby Olympics

Characters in black are common family names: Yang, Zhang, Li, and Wang. Characters in color are unconventional given names.

Ao Yun
Olympics

Yi A
Yi A means 1A (a spin on A1, meaning the very best).

Mo Xiang Gai
Combining Xiang Gai (want to change) and the surname Mo (none) creates a comic name: Mr. Don't-Want-to-Change.

Ao Si Rui Na
The characters aim to sound like a foreign name: "Osrina."

Chang'e
The name of China's moon goddess and its 2007 lunar orbiter.

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1, 2 AND 3 MG TABLETS

A great tomorrow starts tonight.

IMPORTANT SAFETY INFORMATION:

Lunesta helps you fall asleep quickly, so take it right before bed. Be sure you have at least eight hours to devote to sleep before becoming active. Until you know how you'll react to Lunesta, you should not drive or operate machinery. Do not take Lunesta with alcohol. Call your doctor right away if after taking Lunesta you walk, drive, eat or engage in other activities while asleep. In rare cases severe allergic reactions can occur. Most sleep medicines carry some risk of dependency. Side effects may include unpleasant taste, headache, drowsiness and dizziness. You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch or call 1-800-FDA-1088. See important patient information on the next page.

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Lunesta™ (eszopiclone)©

1, 2 AND 3 MG TABLETS

Please read this summary of information about LUNESTA before you talk to your doctor or start using LUNESTA. It is not meant to take the place of your doctor's instructions. If you have any questions about LUNESTA tablets, be sure to ask your doctor or pharmacist.

LUNESTA is used to treat different types of sleep problems, such as difficulty in falling asleep, difficulty in maintaining sleep during the night, and waking up too early in the morning. Most people with insomnia have more than one of these problems. You should take LUNESTA immediately before going to bed because of the risk of falling.

LUNESTA belongs to a group of medicines known as "hypnotics" or, simply, sleep medicines. There are many different sleep medicines available to help people sleep better. Insomnia is often transient and intermittent. It usually requires treatment for only a short time, usually 7 to 10 days up to 2 weeks. If your insomnia does not improve after 7 to 10 days of treatment, see your doctor, because it may be a sign of an underlying condition. Some people have chronic sleep problems that may require more prolonged use of sleep medicine. However, you should not use these medicines for long periods without talking with your doctor about the risks and benefits of prolonged use.

Side Effects

All medicines have side effects. The most common side effects of sleep medicines are:

- Drowsiness
- Dizziness
- Lightheadedness
- Difficulty with coordination

Sleep medicines can make you sleepy during the day. How drowsy you feel depends upon how your body reacts to the medicine, which sleep medicine you are taking, and how large a dose your doctor has prescribed. Daytime drowsiness is best avoided by taking the lowest dose possible that will still help you sleep at night. Your doctor will work with you to find the dose of LUNESTA that is best for you. Some people taking LUNESTA have reported next-day sleepiness.

To manage these side effects while you are taking this medicine:

- When you first start taking LUNESTA or any other sleep medicine, until you know whether the medicine will still have some effect on you the next day, use extreme care while doing anything that requires complete alertness, such as driving a car, operating machinery, or piloting an aircraft.
- Do not drink alcohol when you are taking LUNESTA or any sleep medicine. Alcohol can increase the side effects of LUNESTA or any other sleep medicine.
- Do not take any other medicines without asking your doctor first. This includes medicines you can buy without a prescription. Some medicines can cause drowsiness and are best avoided while taking LUNESTA.
- Always take the exact dose of LUNESTA prescribed by your doctor. Never change your dose without talking to your doctor first.

Special Concerns

There are some special problems that may occur while taking sleep medicines.

Memory Problems

Sleep medicines may cause a special type of memory loss or "amnesia." When this occurs, a person may not remember what has happened for several hours after taking the medicine. This is usually not a problem since most people fall asleep after taking the medicine. Memory loss can be a problem, however, when sleep medicines are taken while traveling, such as during an airplane flight and the person wakes up before the effect of the medicine is gone. This has been called "traveler's amnesia." Memory problems have been reported rarely by patients taking LUNESTA in clinical studies. In most cases, memory problems can be avoided if you take LUNESTA only when you are able to get a full night of sleep before you need to be active again. Be sure to talk to your doctor if you think you are having memory problems.

Tolerance

When sleep medicines are used every night for more than a few weeks, they may lose their effectiveness in helping you sleep. This is known as "tolerance." Development of tolerance to LUNESTA was not observed in a clinical study of 6 months' duration. Insomnia is often transient and intermittent, and prolonged use of sleep medicines is generally not necessary. Some people, though, have chronic sleep problems that may require more prolonged use of sleep medicine. If your sleep problems continue, consult your doctor, who will determine whether other measures are needed to overcome your sleep problems.

Dependence

Sleep medicines can cause dependence in some people, especially when these medicines are used regularly for longer than a few weeks or at high doses. Dependence is the need to continue taking a medicine because stopping it is unpleasant. When people develop dependence, stopping the medicine suddenly may cause unpleasant symptoms (see *Withdrawal* below). They may find they have to keep taking the medicine either at the prescribed dose or at increasing doses just to avoid withdrawal symptoms.

All people taking sleep medicines have some risk of becoming dependent on the medicine. However, people who have been dependent on alcohol or other drugs in the past may have a higher chance of becoming addicted to sleep medicines. This possibility must be considered before using these medicines for more than a few weeks. If you have been addicted to alcohol or drugs in the past, it is important to tell your doctor before starting LUNESTA or any sleep medicine.

Withdrawal

Withdrawal symptoms may occur when sleep medicines are stopped suddenly after being used daily for a long time. In some cases, these symptoms can occur even if the medicine has been used for only a week or two. In mild cases, withdrawal symptoms may include unpleasant feelings. In more severe cases, abdominal and muscle cramps, vomiting, sweating, shakiness, and, rarely, seizures may occur. These more severe withdrawal symptoms are very uncommon. Although withdrawal symptoms have not been observed in the relatively limited controlled trials experience with LUNESTA, there is, nevertheless, the risk of such events in association with the use of any sleep medicine.

Another problem that may occur when sleep medicines are stopped is known as "rebound insomnia." This means that a person may have more trouble sleeping the first few nights after the medicine is stopped than before starting the medicine. If you should experience rebound insomnia, do not get discouraged. This problem usually goes away on its own after 1 or 2 nights.

If you have been taking LUNESTA or any other sleep medicine for more than 1 or 2 weeks, do not stop taking it on your own. Always follow your doctor's directions.

Changes In Behavior And Thinking

Some people using sleep medicines have experienced unusual changes in their thinking and/or behavior. These effects are not common. However, they have included:

- More outgoing or aggressive behavior than normal
- Confusion
- Strange behavior
- Agitation
- Hallucinations
- Worsening of depression
- Suicidal thoughts

How often these effects occur depends on several factors, such as a person's general health, the use of other medicines, and which sleep medicine is being used. Clinical experience with LUNESTA suggests that it is rarely associated with these behavior changes.

It is also important to realize it is rarely clear whether these behavior changes are caused by the medicine, are caused by an illness, or have occurred on their own. In fact, sleep problems that do not

improve may be due to illnesses that were present before the medicine was used. If you or your family notice any changes in your behavior, or if you have any unusual or disturbing thoughts, call your doctor immediately.

Pregnancy And Breastfeeding

Sleep medicines may cause sedation or other potential effects in the unborn baby when used during the last weeks of pregnancy. Be sure to tell your doctor if you are pregnant, if you are planning to become pregnant, or if you become pregnant while taking LUNESTA.

In addition, a very small amount of LUNESTA may be present in breast milk after use of the medication. The effects of very small amounts of LUNESTA on an infant are not known; therefore, as with all other prescription sleep medicines, it is recommended that you not take LUNESTA if you are breastfeeding a baby.

Safe Use Of Sleep Medicines

To ensure the safe and effective use of LUNESTA or any other sleep medicine, you should observe the following cautions:

1. LUNESTA is a prescription medicine and should be used ONLY as directed by your doctor. Follow your doctor's instructions about how to take, when to take, and how long to take LUNESTA.
2. Never use LUNESTA or any other sleep medicine for longer than directed by your doctor.
3. If you notice any unusual and/or disturbing thoughts or behavior during treatment with LUNESTA or any other sleep medicine, contact your doctor.
4. Tell your doctor about any medicines you may be taking, including medicines you may buy without a prescription and herbal preparations. You should also tell your doctor if you drink alcohol. DO NOT use alcohol while taking LUNESTA or any other sleep medicine.
5. Do not take LUNESTA unless you are able to get 8 or more hours of sleep before you must be active again.
6. Do not increase the prescribed dose of LUNESTA or any other sleep medicine unless instructed by your doctor.
7. When you first start taking LUNESTA or any other sleep medicine, until you know whether the medicine will still have some effect on you the next day, use extreme care while doing anything that requires complete alertness, such as driving a car, operating machinery, or piloting an aircraft.
8. Be aware that you may have more sleeping problems the first night or two after stopping any sleep medicine.
9. Be sure to tell your doctor if you are pregnant, if you are planning to become pregnant, if you become pregnant, or if you are breastfeeding a baby while taking LUNESTA.
10. As with all prescription medicines, never share LUNESTA or any other sleep medicine with anyone else. Always store LUNESTA or any other sleep medicine in the original container and out of reach of children.
11. Be sure to tell your doctor if you suffer from depression.
12. LUNESTA works very quickly. You should only take LUNESTA immediately before going to bed.
13. For LUNESTA to work best, you should not take it with or immediately after a high-fat, heavy meal.
14. Some people, such as older adults (i.e., ages 65 and over) and people with liver disease, should start with the lower dose (1 mg) of LUNESTA. Your doctor may choose to start therapy at 2 mg. In general, adults under age 65 should be treated with 2 or 3 mg.
15. Each tablet is a single dose; do not crush or break the tablet.

Note: This summary provides important information about LUNESTA. If you would like more information, ask your doctor or pharmacist to let you read the Prescribing Information and then discuss it with him or her.

Rx only

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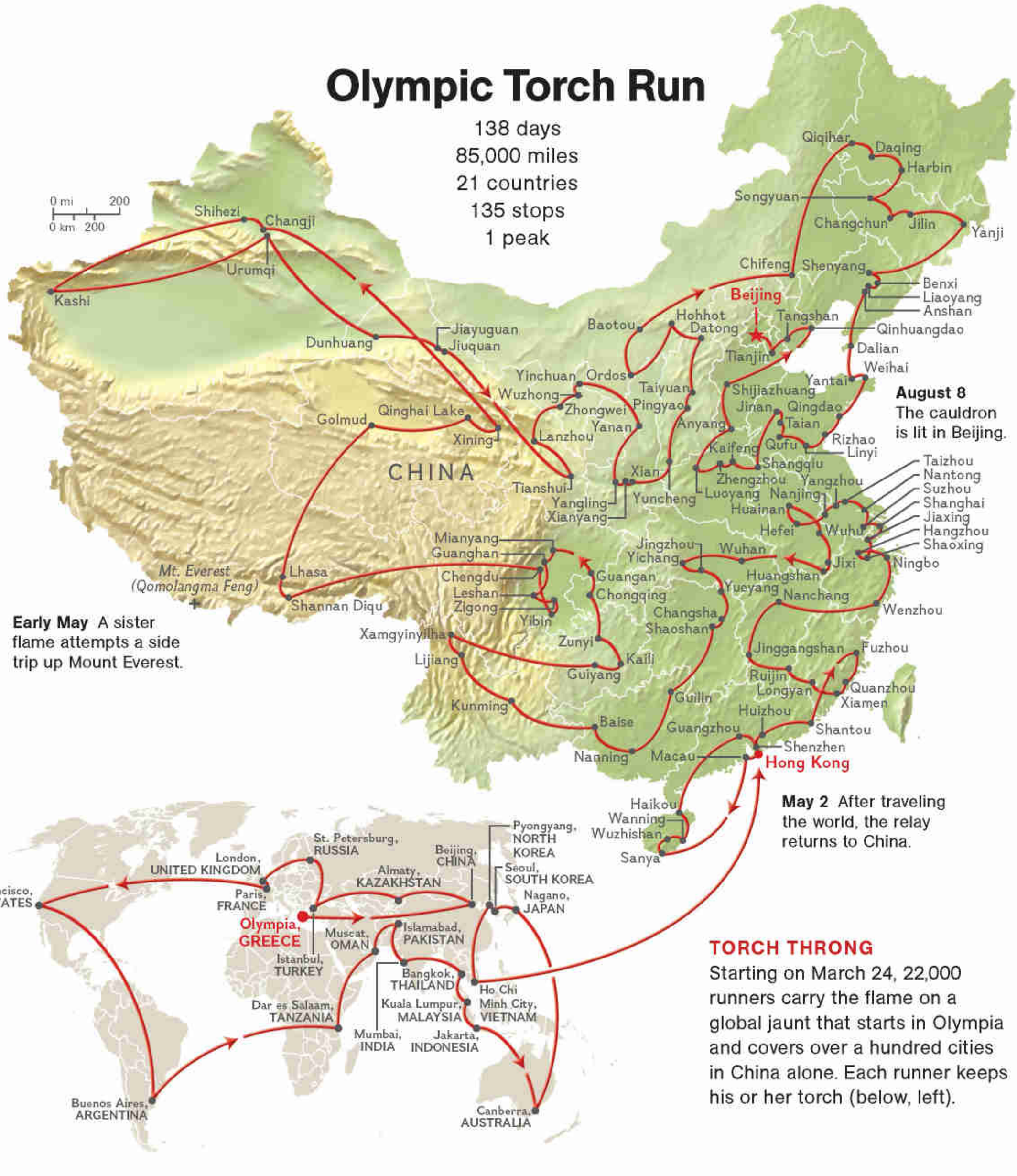
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TORCH THRONG

Starting on March 24, 22,000 runners carry the flame on a global jaunt that starts in Olympia and covers over a hundred cities in China alone. Each runner keeps his or her torch (below, left).



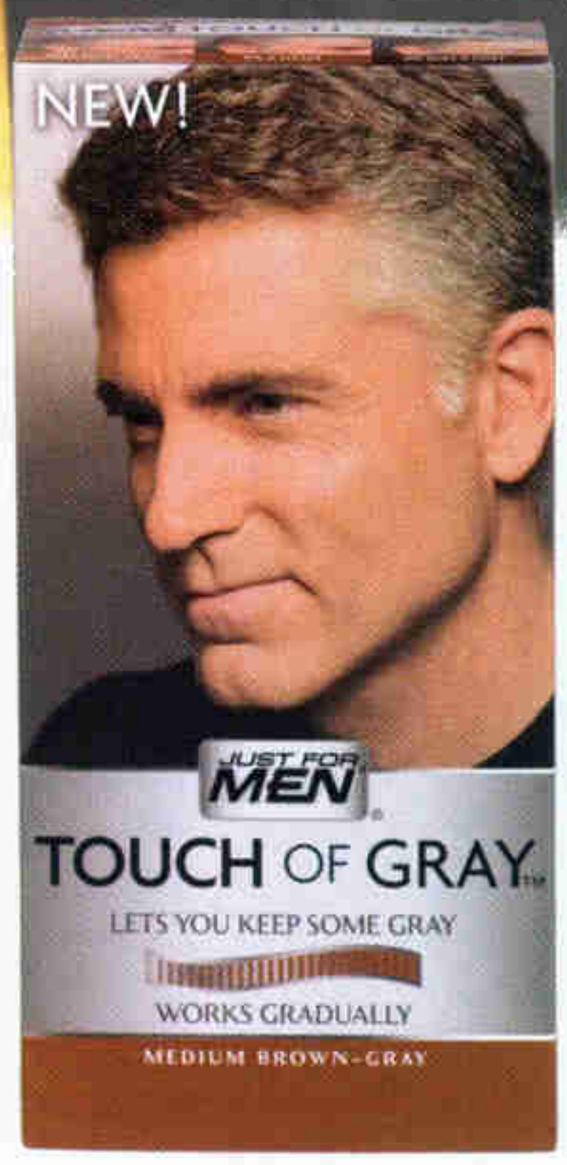
"Where do you think the flame would like to go?" That's what relay expert John MacAloon asked China's Olympic planners after they sought his advice on a path for the torch relay. The answer: just about everywhere. Lit by the sun's rays in Greece, the 2008 flame will visit six continents and travel a variation of the Silk Road; a companion flame will head up Mount Everest, shielded from the thin air in a special miner's lantern. Several lanterns, each with a "mother flame" also lit in Greece, will accompany the relay in case the torch goes out.

The original Olympics had no such relay (though nude torch races were run at other ancient events). Carl Diem, head of Berlin's 1936 games, invented the torch relay after seeing the flaming cauldron that debuted at the 1928 Dutch Olympic stadium. "There'd be no point to a relay," says Olympic scholar Robert Barney, "if there was nothing to light at the end." *—Marc Silver*

NGM MAPS. PHOTO: ADAM PRETTY, GETTY IMAGES

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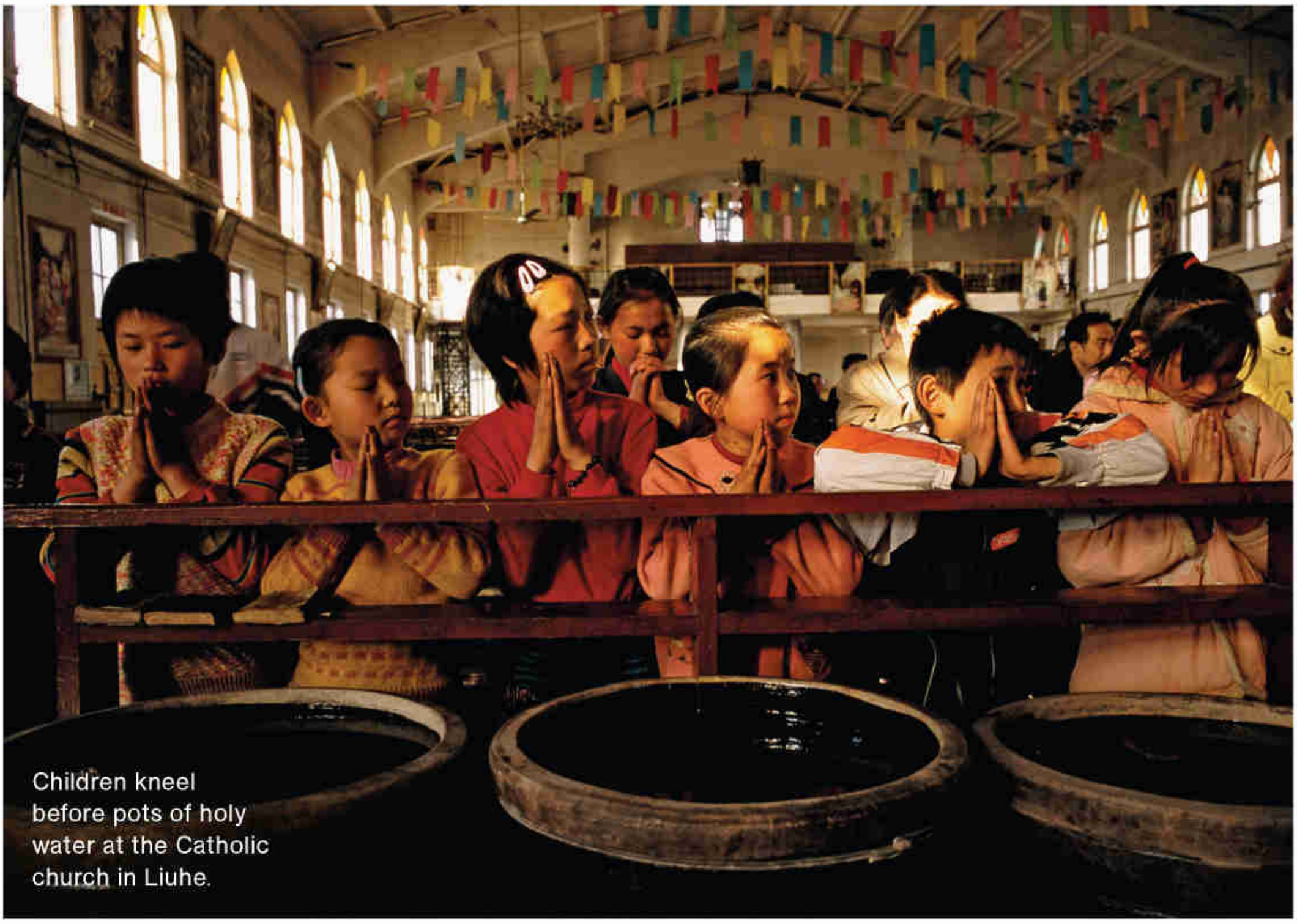


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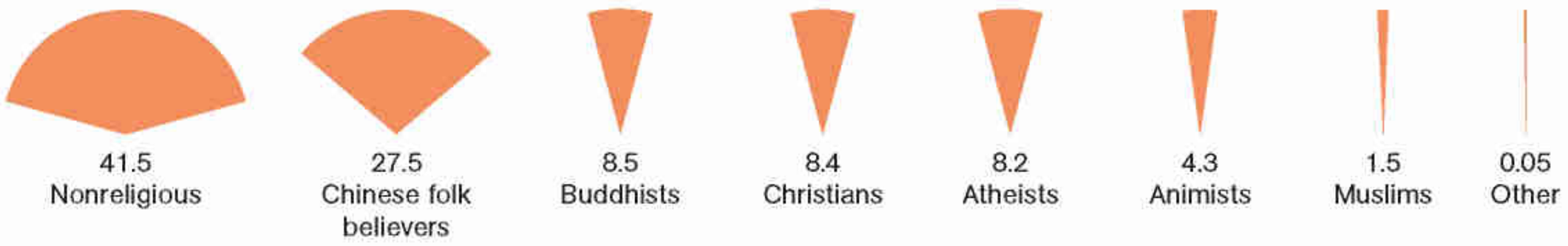
keep a little gray for a great look. Works gradually. Just comb in and rinse.

For The Generation That Refuses To Get Old



Children kneel before pots of holy water at the Catholic church in Liuhe.

Believers and nonbelievers in China, *by percent of total population*



Zeal for Faith Shanghai's century-old St. Ignatius Cathedral comfortably seats 2,000. Even so, the four Sunday Masses are usually standing room only. The phenomenon is not unique to Shanghai. According to a survey completed in 2007 by East China Normal University, 31.4 percent of Chinese age 16 and above say they are religious. Of those roughly 300 million individuals, 40 million identify as Christians—and there's ample evidence the population is much larger and growing rapidly. In 1949 China's Catholic population was 3 to 4 million; today the authoritative Holy Spirit Study Centre in Hong Kong estimates it's about 12 million. The fervor for Christianity does not reflect a split with tradition. In China Western religions accept aspects of local culture, including ancestor veneration.

The spiritual surge is a sharp contrast to the heavy suppression of religion characteristic of China for much of the past 60 years. "The more the suppression, the more the rebound," says Aloysius Jin Luxian, Shanghai's 92-year-old Catholic bishop, who spent 27 years in labor camps and prisons. Many older folk are part of the revival, but the survey shows a concentration among youth. Bishop Jin holds rampant materialism at least partly responsible. "Souls become ever more empty," he says, "which affords religion room to expand." *—Adam Minter*

PHOTO: FRITZ HOFFMANN. SOURCE: WORLD CHRISTIAN DATABASE. PERCENTAGES ARE ROUNDED AND DO NOT TOTAL 100.

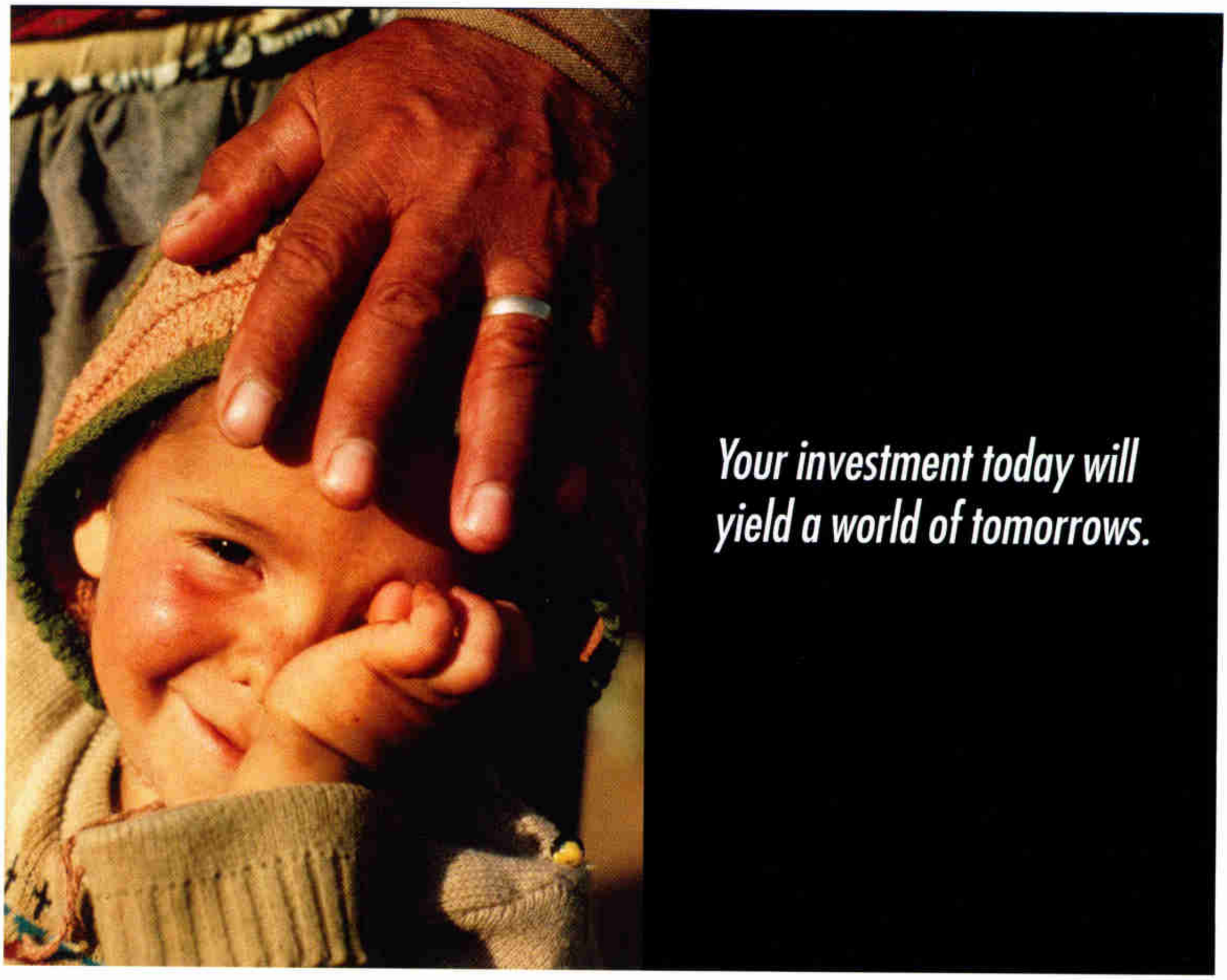




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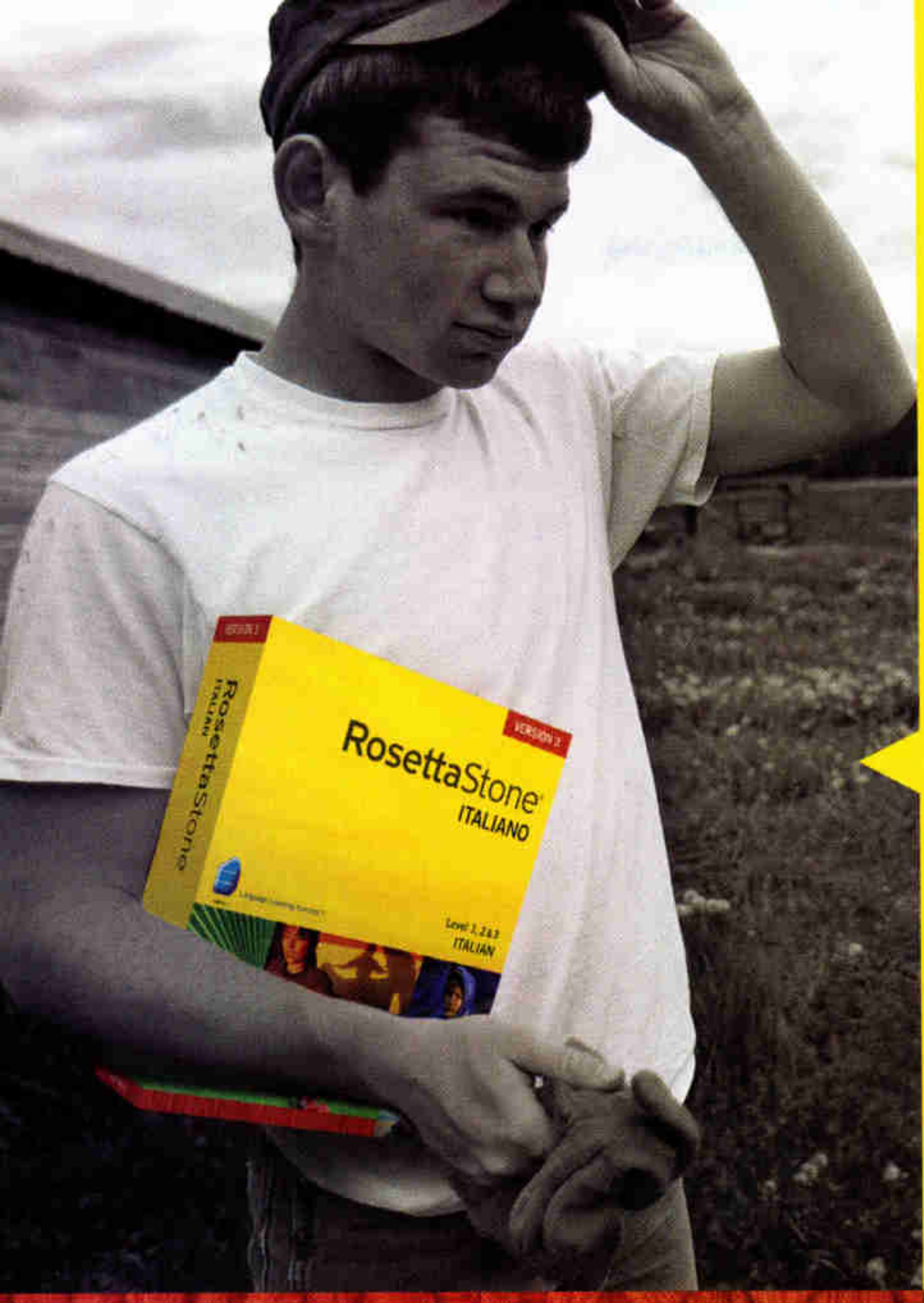
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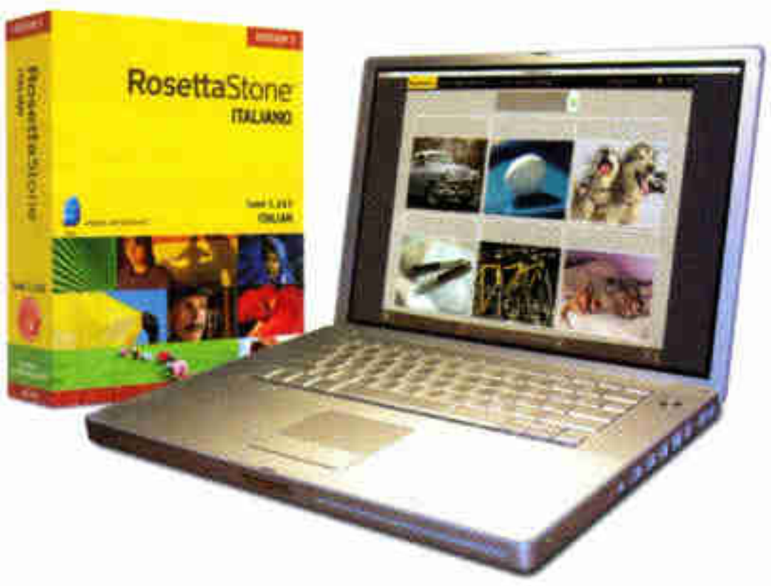
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The Shenzhou VI blasts off at a Gobi desert launch center.

A Place in Space

Last fall China shot for the moon, launching a lunar orbiter and rocketing forward in Asia's scramble to space. Next goals? A space walk in 2008, a moon rover by 2012, a small space station by 2020 or so. Here are key events in China's space program to date. *—Jeremy Berlin*

1950s Qian Xuesen is alleged to be a Cold War spy and deported from the United States. Back in China, he lends his expertise to the country's fledgling rocket program (with Soviet help until 1960) and a short-lived satellite initiative.

1960s Even as China develops its first rocket—the Long March, which will later bear satellites into space—the Cultural Revolution stunts the program. Many scientists are imprisoned or killed.

1970s The Dong Fang Hong I satellite orbits Earth, making China the world's fifth spacefaring nation.

1980s Post Mao, China plays catch-up in the space race and looks to earn money by developing and launching satellites for European and other nations.

1990s Pushing to put a man in space, China trains candidates in Russia. But then comes a setback: a controversial episode in which a U.S. congressional committee alleges that U.S. firms aided China's missile program. Afterward, the U.S. works to exclude China from the global commercial launch market, and to rebuff its bid to join the International Space Station.

2000s It's a banner decade so far. In 2003 China becomes the third country to put a person in space, as Yang Liwei circles Earth 14 times over 21 hours. In 2005 two "taikonauts" go on a five-day orbital mission. In 2007 the lunar orbiter Chang'e-1 lifts off.

PHOTO: QIN XIAN'AN, STATE SATELLITE CONTROL CENTER

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ENVIRONMENT

Chopstick Shift A porcelain jar of red plastic chopsticks sits on each of six tables at a Shanghai dumpling café. "Long-term, it's cheaper than disposable wooden ones and produces less waste," says the owner. China makes—and tosses—a lot of chopsticks, using up hundreds of thousands of tons of bamboo, the most popular material, each year. To promote plastic chopsticks, the government has instituted a 5 percent tax on disposables. But customers worry about cleanliness, even though restaurants wash plastic chopsticks with dish soap, sometimes in full view. So at the dumpling café and elsewhere, bamboo is available. After all, a pair costs about a third of a cent. *—Adam Minter*



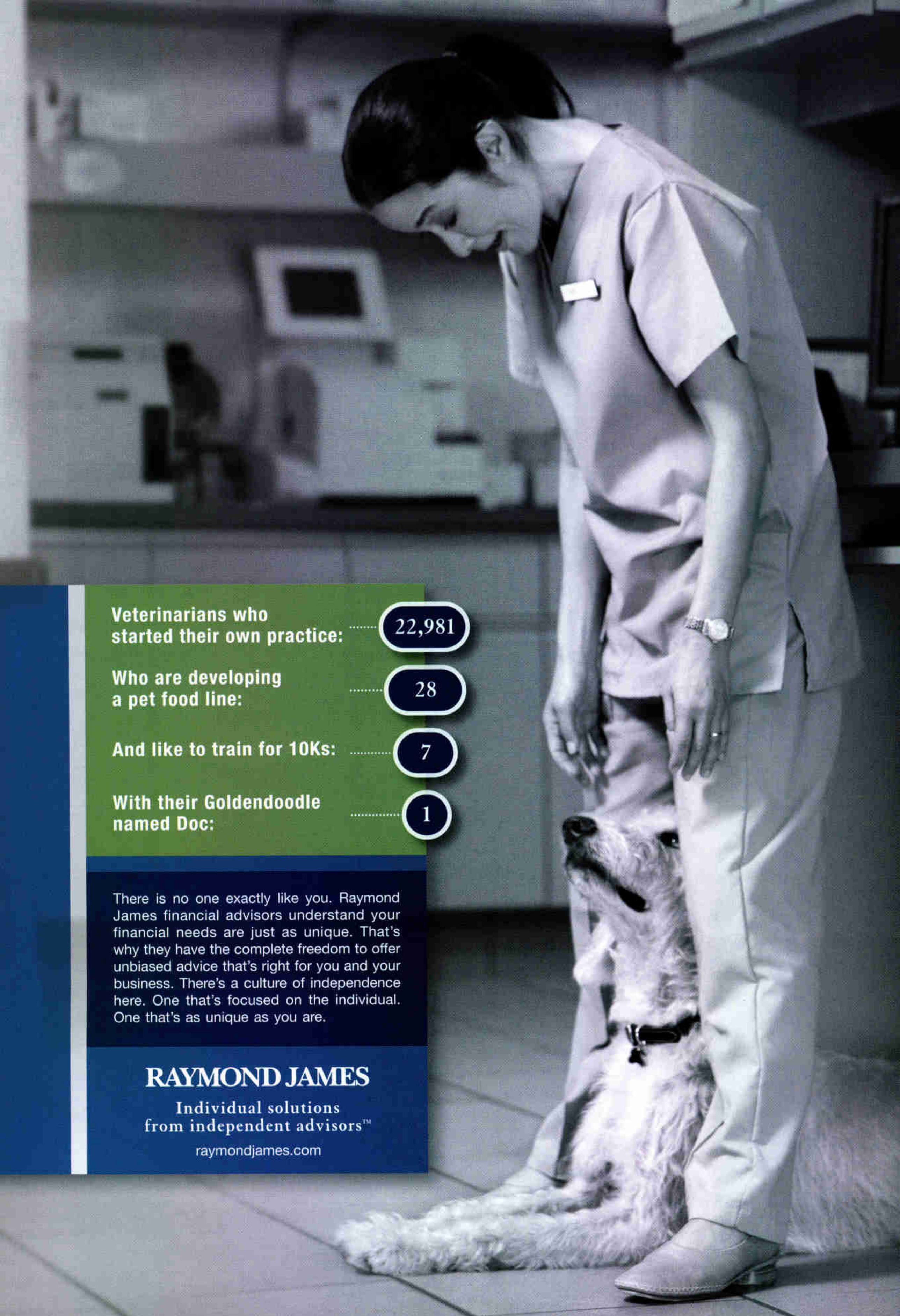
LIFE OF A BAMBOO CHOPSTICK

- Source: scraps from flooring and furniture factories, virgin bamboo
- Automated cutting machine processes bamboo into chopsticks
- Used locally, exported (119,413 tons, mainly bamboo, to Japan alone)
- Off to the landfill



Bundled bamboo in Zhejiang Province will be chopped into chopsticks.

PHOTOS: REBECCA HALE, NG STAFF (TOP); FRITZ HOFFMANN



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An e-biker rides in Shanghai. In some cities e-bikes need license plates like those (bottom) on regular bicycles.



Cycle of Life China's teeming, polluted cities are crying out for a cheap, clean mode of transport. Enter the e-bike. Far more affordable and efficient than cars, electric bikes are replacing traditional ones and now account for an estimated 50 percent of all bicycles in some cities. This year Chinese e-bike makers may roll out 20 million units—bikes that cost consumers $200 to $300, can zip along quietly at a top speed of 20 miles an hour (despite a speed limit of 12), and go 30 miles (more with pedaling) on 16 cents' worth of electricity. The lead-based batteries last about a year, and the rebate they bring means they don't end up in the garbage. Lesson: When the price is right, commuters are happy to reinvent their wheels. *—Anthony Kuhn*

PHOTOS: FRITZ HOFFMANN (TOP); REBECCA HALE, NG STAFF

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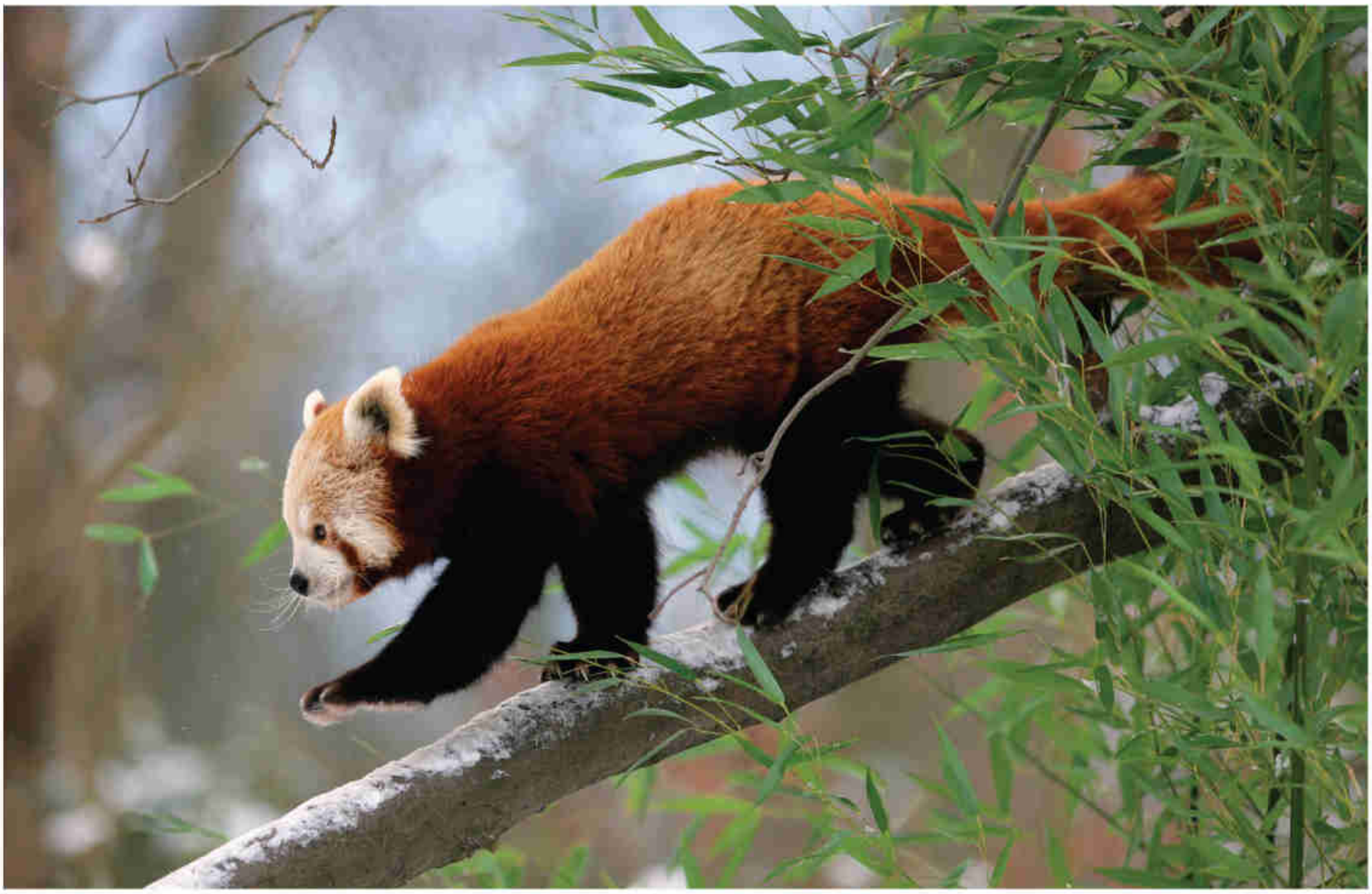
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Tibetan gazelles now have to share their territory with livestock.



Only about 100 Cao vit gibbons still live along the Vietnam-China border.

Animal Backers When biologist Bill Bleisch moved to China in 1987, wildlife conservation was hardly a priority. It was the turbulent era after the Cultural Revolution. "The scientists I wanted to work with had just been allowed back into their offices a few years before," he recalls. At that time China was only an exploiter, renting giant pandas to zoos, killing other animals for pelts and body parts. In two decades Bleisch has seen improvement. As it reaches out to the West, China has begun to pay attention to saving animals. Enforcement hasn't kept up with laws; the market in illegal wildlife products, both domestic and imported, is booming. But Bleisch is hopeful. On a National Geographic grant with Fauna and Flora International, he studied the Cao vit gibbon (above). Once thought hunted to extinction in China, the gibbon now has a chance at a comeback. *—Helen Fields*

PHOTOS (CLOCKWISE FROM TOP): HOLGER EHLERS, ALAMY; ZHAO CHAO, FFI; XI ZHINONG; JAGDEEP RAJPUT, ARDEA; LYNN M. STONE, NPL

How can disease be detected before it strikes?

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Siemens is combining state-of-the-art laboratory diagnostics with imaging technologies with the goal of allowing disease detection at the earliest stages. Molecular medicine will also contribute to this goal, particularly for diseases like cancer or Alzheimer's. And advances in healthcare IT will make healthcare systems more efficient – and even enable more specific care for patients. **www.siemens.com/answers**

Answers for life.

SIEMENS

Sharks in the Soup For millions of years sharks patrolled the oceans with few predators. But then they met a foe: the Chinese epicure. Four hundred years ago shark-fin soup was served at formal banquets by emperors and the wealthiest merchants. As China has prospered, more and more people can afford the dish, which means trouble for sharks.

The fin's appeal isn't obvious. Chefs say that shark fin has almost no flavor. The gelatinous fin needles, fibers of collagen that are left behind when skin and cartilage are stripped away, add texture and a boost to social status—and to virility, some people say. Basketball star Yao Ming appeared in an anti-shark-fin campaign but to little apparent effect. The soup is almost always served at lavish wedding banquets, and many deals are sealed over a steaming bowl.

Tens of millions of sharks die for the soup each year, one reason why populations have declined worldwide. Sharks are victims of lines set for tuna and swordfish; fishermen often cut off the fins and toss the dead or dying shark overboard. With a growing demand for shark fins, some fleets are now targeting the fish. *—Jarrett Wrisley*

Chopsticks hold a tangle of fibrous shark-fin needles.



PHOTO: BEN HORTON

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Senior Momentum

Old people in China do not sleep late. Early each morning millions of senior citizens gather in parks to exercise and socialize. And there are plenty of places to go. A 1995 nationwide fitness program helped establish some 30,000 outdoor recreation areas. Dai Wei, an 82-year-old with wispy hair and boxy glasses, heads to Shanghai's Fuxing Park for tai chi, the meditative martial art of stretching and balance exercises. In the afternoon he visits another park to dance with seniors. "I dance rumba and cha-cha for my physique," Dai says, "but more important, because it makes me happy."

Dai's active lifestyle could also be a reason for his longevity. Zeng Yi, a professor of demography, is leading a study by Duke and Peking University of nearly 37,000 elderly Chinese. Taking into account their baseline health as well as socioeconomic status, family support, and other factors, the study has found that regular exercisers age 80 and older lower their risk of mortality by 20 percent. Indeed, China's average life expectancy of 72.5 years leads many developing nations. But not everyone is on board. Zeng is still trying to convince his 78-year-old Chinese mother to get out and work out. *—Jarrett Wrisley*

PHOTO: MICHAEL YAMASHITA



Camelot Highlands Estate, Santa Maria Valley

KENDALL-JACKSON

We built this hawk a home, now he works for us.

Not too many years ago the Red Tail Hawk was a rarity in this area. Overdevelopment and unhealthy farming practices had chased most of them away.

In 1996, my wife and co-proprietor, Barbara, and I re-introduced both the Red Tail Hawk and the Peregrine Falcon back into the land that was theirs in the first place. Watching free creatures flourish in nature brings a joy to my family that's hard to describe. We built hundreds of raptor perches in our vineyards to give these birds shelter and a place to raise their young. They repay us by helping our vineyards thrive in natural balance.

How does this help us in our pursuit of making world-class wines? Simple. Natural farming solutions lead to a healthier environment. A healthier environment gives us richer soil and stronger vines. Stronger vines produce higher quality grapes, and superior wines...for years to come. I understand that many of you enjoy the taste of our wines but aren't sure why. Hopefully, I can help with **A Taste of the Truth.**



kj.com/truth

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CONSERVATION

Patchy Protection

Old-style Chinese way of managing a national park: build a 13-mile concrete dragon along a mountain ridge, install gondolas, clear trees for shops. New way: no concrete creatures (the dragon in Shizu Mountain National Forest Park was halted last year for lack of a permit) and a premium on conservation.

The greening of the parks will take time. China has conferred varying levels of protection on nearly 2,000 places, including 89 internationally recognized sites. Unfortunately, national agencies don't have the power and resources to oversee all of them. Local authorities preside, with mixed results—from outright abuses to the felling of trees to build viewing platforms, where much of the public prefers to admire nature in lieu of hiking and camping. But there is progress. In the remote northwestern region of Xinjiang, the government plans to expand and improve Kanas National Geological Park. Inside its boundaries: roughly 3,800 square miles of grasslands, mountains, and a deep alpine lake. Businesses will move to an "accommodation zone" outside the park. Buses will take visitors to scenic spots, then back to the souvenir shops. *—Adam Minter*





A viewing platform lets visitors admire mirrored images in Panda Lake.

PHOTO: MICHAEL YAMASHITA. NGM MAPS. SOURCE: WORLD DATABASE ON PROTECTED AREAS, UNEP-WCMA AND IUCN, MAY 2007

PROJECT HOPE
FOUNDED IN 1958

In 1983, at the invitation of China's Ministry of Health and university medical centers, Project HOPE became the first private international health organization to make a long-term commitment to improving that vast nation's healthcare system.

Project HOPE's China Diabetes Program was launched to increase both public and professional awareness of diabetes and improve the quality and availability of diabetes care. To learn more, visit www.projecthope.org.



BD
Helping all people live healthy lives

Partners in health

More than 30 million people in China are living with a disease they know little or nothing about. Diabetes, known for decades in many countries as the "silent killer," rapidly has become a major chronic disease for the Chinese.[1]

Project HOPE and its partners are combining education with public awareness campaigns to slow the spread of the disease. The ultimate goal of the partnership is to train Chinese nurses, physicians, and dieticians so they, in turn, can train staff and medical professionals. To date, more than 170,000 individuals in 32 Chinese provinces have received training.

Since the development of the BD glass syringe for insulin delivery in 1924, BD has been a major provider of healthcare devices and educational programs for health professionals and diabetes sufferers. It was natural, then, for BD to partner with Project HOPE and share its expertise and financial support with the China Diabetes Program.

Named one of *America's Most Admired Companies*[2] as well as one of the *World's Most Ethical Companies,*[3] BD provides advanced medical technology to serve the global community's greatest needs.

BD – *Helping all people live healthy lives.*

[1] WHO/*Diabetes Care*, 2004
[2] *FORTUNE*, March 2008
[3] *Ethisphere*™ *Magazine*, April 2007

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LED "embers" glow with each puff of China's tobacco-free e-pipe, and clouds of pseudo-smoky vapor waft out.

Blowing Smoke Making deals the Chinese way, lesson number one: Don't just shake hands with a potential business partner, pass over a fresh cigarette as well. That's one sign of just how hooked China is. Its 350 million smokers include many who should know better. Sixty percent of male doctors light up, led by former health minister Gao Qiang. Each year smoking kills more than one million Chinese and costs over six billion dollars in health care.

Now one Chinese company says its electronic pipes and battery-powered e-cigarettes can make smoking safer, boasting that there's no tobacco, no tar, no carcinogens. The devices use ultrasound technology to atomize liquid nicotine into inhalable droplets. Critics have raised concerns about the nicotine content. A New Zealand university is recruiting smokers for the first trials, including a look at whether e-smoking might help them quit. At the moment, the World Health Organization representative in China does not recommend using either device. The company is betting that lots of smokers abroad will be eager to sidestep indoor smoking bans with $200 e-cigarettes. But at that price, Chinese businessmen are unlikely to start handing them out. *—Louisa Lim*

CHINA'S TOBACCO INROADS

33
Percent of the world's smokers

3 million
New smokers each year

540 million
People exposed to hazardous amounts of secondhand smoke

$39 billion
Tax revenue in 2006 from smoking

20
Average number of cigarettes a man smokes each day

PHOTO: MARK LEONG

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NCL

NORWEGIAN CRUISE LINE®

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From the moment you board the youngest fleet on the planet, you're free to play when you want, eat when you want and sleep when you want. It's a novel idea about leaving schedules, rules and dress codes behind, and it's called Freestyle Cruising®. To find out more, visit ncl.com, dial 1.866.234.0292 or call your travel professional.

YOUNGEST FLEET BASED ON MAJOR NORTH AMERICAN CRUISE LINES. ©2008 NCL CORPORATION LTD. SHIPS' REGISTRY: BAHAMAS.



Up Against the Wall It sounds like a straightforward task: map the Great Wall of China. It is not. The wall is, in fact, many walls—hundreds, if not thousands, of disconnected sections. While the Ming (1368-1644) were the most prolific of its many builders, some parts date to the Warring States era of 443-221 B.C., when rival kingdoms were defending themselves. After that period the northernmost walls were linked and extended to ward off attackers. Over time, portions have collapsed and bricks have been taken for homes or roads. Using fieldwork and high-tech tools, China is in the midst of an effort to document the myriad walls—if they can all be found. Target completion date is 2010. *—Jarrett Wrisley*

The wall in Badaling, 43 miles northwest of Beijing, was restored in the 1950s.



GOING LONG
The Ming wall alone extends over 3,800 miles, with 6,700 beacon towers.

Known Great Wall segments
Ming dynasty (1368–1644)
Other dynasties
0 mi 200
0 km 200

RUSSIA
MONGOLIA
NORTH KOREA
C H I N A
Baotou
Datong
Badaling
Beijing
Tianjin
Dalian
Bo Hai
Yinchuan
Xining
Lanzhou
Xian
Yellow (Huang)
Yellow Sea
Qingdao
Huaiyin

FALLING SHORT
Manchu armies from the north breached the wall and invaded Beijing in 1644.

NGM MAPS. SOURCE: CHENG DALIN, STATE ADMINISTRATION OF CULTURAL HERITAGE
PHOTO: MICHAEL YAMASHITA

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Van Gogh's canvas

Copycat, Inc. Van Gogh spent months on his sunflower paintings. In the village of Dafen in southern China, an ace imitator can whip up a clone in a day or two. Thousands of Dafen painters mimic old masterpieces. Prices start at $4 or so locally and run $100 and up overseas and online. Annual exports, mostly to Europe and the U.S., total tens of millions of dollars. So it's a big business.

Is it art? "An artist must be a creator," says Mu Jiashan, a gifted Chinese landscapist and an art educator. "A good artist would not copy a painting to make money." Copyist Wu Yangliang, 36, admits: "I'd love to give up replication and follow my artistic dreams." But a steady flow of sunflowers pays the rent. *—Shamus Sillar*



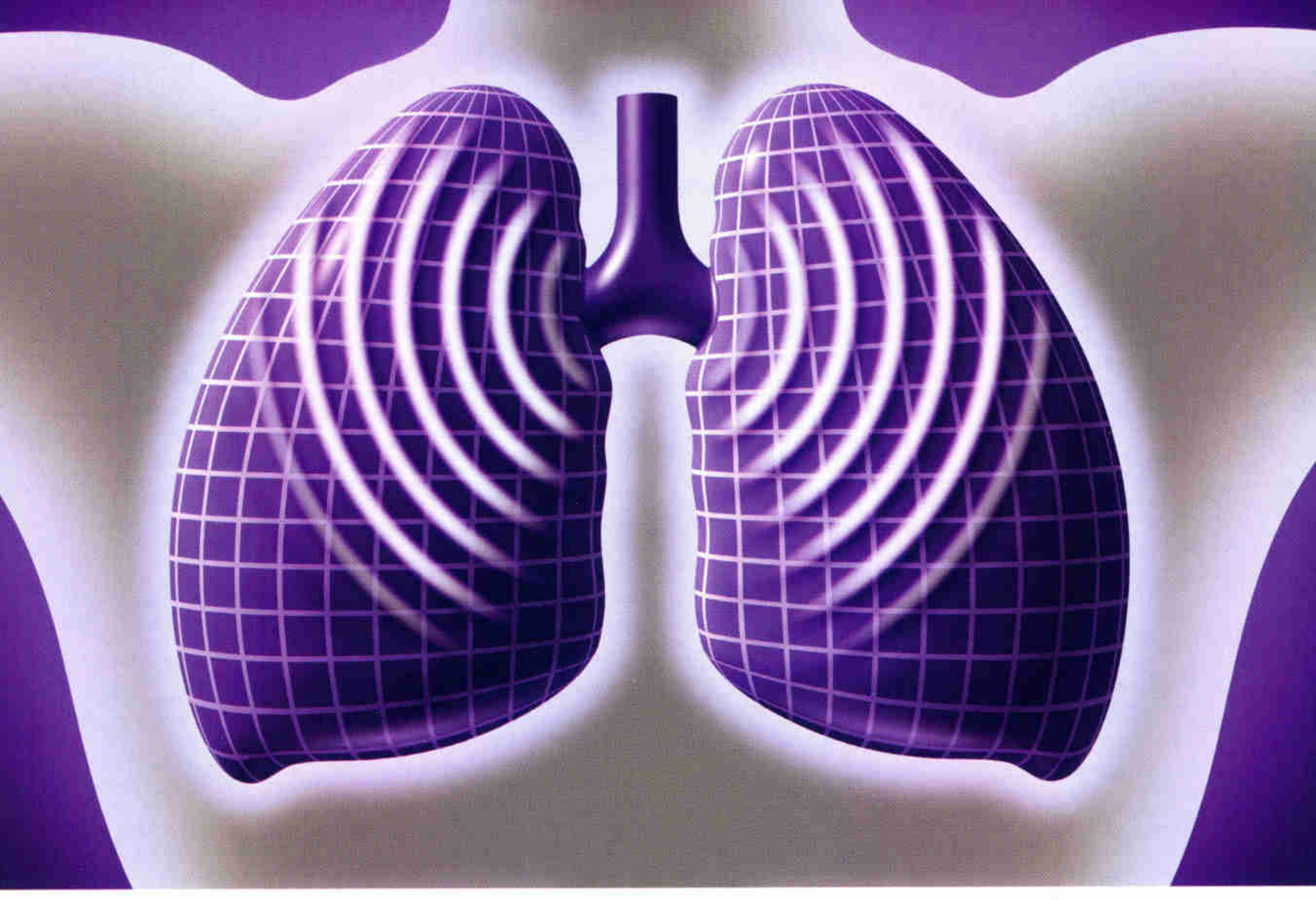
KNOCKOFFS

In 1989 Hong Kong art dealer Huang Jiang came to the Chinese village of Dafen. Rent and labor were cheap, and so a replica center was born.

- Some copyists are self-taught; others are art school grads.
- The fastest workers do as many as 20 paintings in a day.
- A copyist can earn $1,500 to $4,500 a year; average salary in China's cities is $2,500.
- Demand is surging for copies of contemporary Chinese art.
- For an extra fee, an artist will paint your mother's face on Mona Lisa's body.

An artist in Dafen displays a not-so-perfect reproduction.

PHOTOS: THE NATIONAL GALLERY, LONDON (TOP); MICHAEL WOLF, LAIF/REDUX



ADVAIR® helps significantly improve lung function so you can breathe better.*



If you have COPD associated with chronic bronchitis, ADVAIR 250/50 may help.
ADVAIR works differently than other COPD medications. It is the only product with an anti-inflammatory and a bronchodilator working together to help improve lung function. Talk to your doctor and find out if ADVAIR is right for you.

Get your first full prescription FREE.† Go to advairCOPD.com or call 1-800-768-0200.

It is not known how anti-inflammatories work in COPD.

Important Information: ADVAIR DISKUS 250/50 is approved for controlling symptoms and preventing wheezing in adults with COPD associated with chronic bronchitis. The benefit of using ADVAIR DISKUS for longer than 6 months has not been evaluated. You should only take 1 inhalation of ADVAIR DISKUS 250/50 twice a day. Taking higher doses will not provide additional benefits but may increase your chance of certain side effects. Patients with COPD taking ADVAIR DISKUS may have a higher chance of pneumonia. Call your doctor if you notice any of the following symptoms: change in amount or color of sputum, fever, chills, increased cough, or increased breathing problems. Patients at risk for developing bone loss (osteoporosis) and some eye problems (cataracts or glaucoma) should be aware that use of inhaled corticosteroids, including ADVAIR DISKUS, may increase your risk. You should consider having regular eye exams. ADVAIR DISKUS does not replace fast-acting inhalers for acute symptoms.

* Measured by a breathing test in people taking ADVAIR 250/50, compared with people taking either fluticasone propionate 250 mcg or salmeterol 50 mcg. Maximum effects may take several weeks. Your results may vary.

† See advairCOPD.com for eligibility rules.

Please see accompanying important information about ADVAIR DISKUS 250/50.

ADVAIR DISKUS® 250/50
(fluticasone propionate 250 mcg and salmeterol 50 mcg inhalation powder)

You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch, or call 1-800-FDA-1088.

gsk GlaxoSmithKline

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If you smoke and want to quit, you can learn more at way2quit.com.

Important Information about ADVAIR DISKUS

ADVAIR DISKUS® 100/50, 250/50, 500/50

(fluticasone propionate 100, 250, 500 mcg and salmeterol 50 mcg inhalation powder)

What is the most important information I should know about ADVAIR DISKUS?

In patients with asthma, long-acting beta$_2$-agonist medicines such as salmeterol (one of the medications in ADVAIR®) may increase the chance of death from asthma problems. In a large asthma study, more patients who used salmeterol died from asthma problems compared with patients who did not use salmeterol. So ADVAIR is not for patients whose asthma is well controlled on another asthma controller medicine such as low- to medium-dose inhaled corticosteroids or only need a fast-acting inhaler once in a while. Talk with your doctor about this risk and the benefits of treating your asthma with ADVAIR.

ADVAIR should not be used to treat a severe attack of asthma or chronic obstructive pulmonary disease (COPD) requiring emergency medical treatment.

ADVAIR should not be used to relieve sudden symptoms or sudden breathing problems. Always have a fast-acting inhaler with you to treat sudden breathing difficulty. If you do not have a fast-acting inhaler, contact your doctor to have one prescribed for you.

What is ADVAIR DISKUS?

There are two medicines in ADVAIR: Fluticasone propionate, an inhaled anti-inflammatory belonging to a group of medicines commonly referred to as corticosteroids; and salmeterol, a long-acting, inhaled bronchodilator belonging to a group of medicines commonly referred to as beta$_2$-agonists. There are 3 strengths of ADVAIR: 100/50, 250/50, 500/50.

For Asthma

- ADVAIR is approved for the maintenance treatment of asthma in patients 4 years of age and older. ADVAIR should only be used if your doctor decides that another asthma controller medicine alone does not control your asthma or that you need 2 asthma controller medications.
- The strength of ADVAIR approved for patients ages 4 to 11 years who experience symptoms on an inhaled corticosteroid is ADVAIR DISKUS 100/50. All 3 strengths are approved for patients with asthma ages 12 years and older.

For COPD associated with chronic bronchitis

ADVAIR 250/50 is the only approved dose for the maintenance treatment of airflow obstruction in patients with COPD associated with chronic bronchitis. The benefit of using ADVAIR for longer than 6 months has not been evaluated. The way anti-inflammatories work in the treatment of COPD is not well defined.

Who should not take ADVAIR DISKUS?

You should not start ADVAIR if your asthma is becoming significantly or rapidly worse, which can be life threatening. Serious respiratory events, including death, have been reported in patients who started taking salmeterol in this situation, although it is not possible to tell whether salmeterol contributed to these events. This may also occur in patients with less severe asthma.

You should not take ADVAIR if you have had an allergic reaction to it or any of its components (salmeterol, fluticasone propionate, or lactose). Tell your doctor if you are allergic to ADVAIR, any other medications, or food products. If you experience an allergic reaction after taking ADVAIR, stop using ADVAIR immediately and contact your doctor. Allergic reactions are when you experience one or more of the following: choking; breathing problems; swelling of the face, mouth and/or tongue; rash; hives; itching; or welts on the skin.

Tell your doctor about the following:

- If you are using your fast-acting inhaler more often or using more doses than you normally do (e.g., 4 or more inhalations of your fast-acting inhaler for 2 or more days in a row or a whole canister of your fast-acting inhaler in 8 weeks' time), it could be a sign that your asthma is getting worse. If this occurs, tell your doctor immediately.
- If you have been using your fast-acting inhaler regularly (e.g., four times a day). Your doctor may tell you to stop the regular use of these medications.
- If your peak flow meter results decrease. Your doctor will tell you the numbers that are right for you.
- If you have asthma and your symptoms do not improve after using ADVAIR regularly for 1 week.
- If you have been on an oral steroid, like prednisone, and are now using ADVAIR. You should be very careful as you may be less able to heal after surgery, infection, or serious injury. It takes a number of months for the body to recover its ability to make its own steroid hormones after use of oral steroids. Switching from an oral steroid may also unmask a condition previously suppressed by the oral steroid such as allergies, conjunctivitis, eczema, arthritis, and eosinophilic conditions. Symptoms of an eosinophilic condition can include rash, worsening breathing problems, heart complications, and/or feeling of "pins and needles" or numbness in the arms and legs. Talk to your doctor immediately if you experience any of these symptoms.
- Sometimes patients experience unexpected bronchospasm right after taking ADVAIR. This condition can be life threatening and if it occurs, you should immediately stop using ADVAIR and seek immediate medical attention.
- If you have any type of heart disease such as coronary artery disease, irregular heart beat or high blood pressure, ADVAIR should be used with caution. Be sure to talk with your doctor about your condition because salmeterol, one of the components of ADVAIR, may affect the heart by increasing heart rate and blood pressure. It may cause symptoms such as heart fluttering, chest pain, rapid heart rate, tremor, or nervousness.
- If you have seizures, overactive thyroid gland, liver problems, or are sensitive to certain medications for breathing.
- If your breathing problems get worse over time or if your fast-acting inhaler does not work as well for you while using ADVAIR. If your breathing problems worsen quickly, get emergency medical care.
- If you have been exposed to or currently have chickenpox or measles or if you have an immune system problem. Patients using medications that weaken the immune system are more likely to get infections than healthy individuals. ADVAIR contains a corticosteroid (fluticasone propionate) which may weaken the immune system. Infections like chickenpox and measles, for example, can be very serious or even fatal in susceptible patients using corticosteroids.

How should I take ADVAIR DISKUS?

ADVAIR should be used 1 inhalation, twice a day (morning and evening). ADVAIR should never be taken more than 1 inhalation twice a day. The full benefit of taking ADVAIR may take 1 week or longer.

If you miss a dose of ADVAIR, just skip that dose. Take your next dose at your usual time. Do not take two doses at one time.

Do not stop using ADVAIR unless told to do so by your doctor because your symptoms might get worse.

Do not change or stop any of your medicines used to control or treat your breathing problems. Your doctor will adjust your medicines as needed.

When using ADVAIR, remember:

- Never breathe into or take the DISKUS® apart.
- Always use the DISKUS in a level position.
- After each inhalation, rinse your mouth with water without swallowing.
- Never wash any part of the DISKUS. Always keep it in a dry place.
- Never take an extra dose, even if you feel you did not receive a dose.
- Discard 1 month after removal from the foil pouch.
- Do not use ADVAIR with a spacer device.

Children should use ADVAIR with an adult's help as instructed by the child's doctor.

Can I take ADVAIR DISKUS with other medications?

Tell your doctor about all the medications you take, including prescription and nonprescription medications, vitamins, and herbal supplements.

If you are taking ADVAIR DISKUS, do not use other long-acting beta$_2$-agonist–containing medications, such as SEREVENT® DISKUS or Foradil® Aerolizer,® or any reason.

If you take ritonavir (an HIV medication), tell your doctor. Ritonavir may interact with ADVAIR and could cause serious side effects. The anti-HIV medicines Norvir® Soft Gelatin Capsules, Norvir Oral Solution, and Kaletra® contain ritonavir.

No formal drug interaction studies have been performed with ADVAIR.

In clinical studies, there were no differences in effects on the heart when ADVAIR was taken with varying amounts of albuterol. The effect of using ADVAIR in patients with asthma while taking more than 9 puffs a day of albuterol has not been studied.

ADVAIR should be used with extreme caution during and up to 2 weeks after treatment with monoamine oxidase (MAO) inhibitors or tricyclic antidepressants since these medications can cause ADVAIR to have an even greater effect on the circulatory system.

ADVAIR should be used with caution in people who are taking ketoconazole (an antifungus medication) or other drugs broken down by the body in a similar way. These medications can cause ADVAIR to have greater steroid side effects.

Generally, people with asthma should not take beta-blockers because they counteract the effects of beta$_2$-agonists and may also cause severe bronchospasm. However, in some cases, for instance, following a heart attack, selective beta-blockers may still be used if there is no acceptable alternative.

The ECG changes and/or low blood potassium that may occur with some diuretics may be made worse by ADVAIR, especially at higher-than-recommended doses. Caution should be used when these drugs are used together.

In clinical studies, there was no difference in side effects when ADVAIR was taken with methylxanthines (e.g., theophylline) or with FLONASE® (fluticasone propionate).

What are other important safety considerations with ADVAIR DISKUS?

Pneumonia: Lower respiratory tract infections, including pneumonia, have been reported with the use of inhaled corticosteroids, including ADVAIR. There was a higher incidence of pneumonia reported in patients with COPD taking ADVAIR DISKUS in clinical studies.

Osteoporosis: Long-term use of inhaled corticosteroids may result in bone loss (osteoporosis). Patients who are at risk for increased bone loss (tobacco use, advanced age, inactive lifestyle, poor nutrition, family history of osteoporosis, or long-term use of drugs such as corticosteroids) may have a greater risk with ADVAIR. If you have risk factors for bone loss, you should talk to your doctor about ways to reduce your risk and whether you should have your bone density evaluated.

Glaucoma and cataracts: Glaucoma, increased pressure in the eyes, and cataracts have been reported with the use of inhaled steroids, including fluticasone propionate, a medicine contained in ADVAIR. Regular eye examinations should be considered if you are taking ADVAIR.

Blood sugar: Salmeterol may affect blood sugar and/or cause low blood potassium in some patients, which could lead to a side effect like an irregular heart rate. Significant changes in blood sugar and blood potassium were seen infrequently in clinical studies with ADVAIR.

Growth: Inhaled steroids may cause a reduction in growth velocity in children and adolescents.

Steroids: Taking steroids can affect your body's ability to make its own steroid hormones, which are needed during infections and times of severe stress to your body, such as an operation. These effects can sometimes be seen with inhaled steroids (but it is more common with oral steroids), especially when taken at higher-than-recommended doses over a long period of time. In some cases, these effects may be severe. Inhaled steroids often help control symptoms with less side effects than oral steroids.

Yeast infections: Patients taking ADVAIR may develop yeast infections of the mouth and/or throat ("thrush") that should be treated by their doctor.

Tuberculosis or other untreated infections: ADVAIR should be used with caution, if at all, in patients with tuberculosis, herpes infections of the eye, or other untreated infections.

What are the other possible side effects of ADVAIR DISKUS?

ADVAIR may produce side effects in some patients. In clinical studies, the most common side effects with ADVAIR included:

- Respiratory infections
- Throat irritation
- Hoarseness
- Sinus infection
- Yeast infection of the mouth
- Bronchitis
- Cough
- Headaches
- Nausea and vomiting
- Diarrhea
- Musculoskeletal pain
- Dizziness
- Fever
- Ear, nose, and throat infections
- Nosebleed

Tell your doctor about any side effect that bothers you or that does not go away. These are not all the side effects with ADVAIR. Ask your doctor or pharmacist for more information.

What if I am pregnant, planning to become pregnant, or nursing?

Talk to your doctor about the benefits and risks of using ADVAIR during pregnancy, labor, or if you are nursing. There have been no studies of ADVAIR used during pregnancy, labor, or in nursing women. Salmeterol is known to interfere with labor contractions. It is not known whether ADVAIR is excreted in breast milk, but other corticosteroids have been detected in human breast milk. Fluticasone propionate, like other corticosteroids, has been associated with birth defects in animals (e.g., cleft palate and fetal death). Salmeterol showed no effect on fertility in rats at 180 times the maximum recommended daily dose.

What other important tests were conducted with ADVAIR?

There is no evidence of enhanced toxicity with ADVAIR compared with the components administered separately. In animal studies with doses much higher than those used in humans, salmeterol was associated with uterine tumors. Your healthcare professional can tell you more about how drugs are tested on animals and what the results of these tests may mean to your safety.

For more information on ADVAIR DISKUS

This page is only a brief summary of important information about ADVAIR DISKUS. For more information, talk to your doctor. You can also visit www.ADVAIR.com or call 1-888-825-5249. Patients receiving ADVAIR DISKUS should read the medication guide provided by the pharmacist with the prescription.

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"Within two weeks of using Hydroxatone®, I was getting compliments on my skin from friends and co-workers. My skin not only feels great, but it looks great too! You've made me a Hydroxatone® believer!"

— Robin B., Los Angeles

Results not typical

In recent years Botox®* has been promoted as the leader of anti-wrinkle treatments. Although it can be successful, it is very expensive, painful, must be administered by a physician, and, in many cases, two to three treatments are needed for the desired corrections. After years of research and testing, a new safe, more affordable product offering comparable results is now available.

Most Advanced Anti-Aging Product Available

Hydroxatone® is a true, clinically proven Botox®* alternative. It is a superior facial cream that can reduce deep wrinkles, and it's completely non-toxic, safe and has no side effects. How can it rival Botox®*? Hydroxatone® contains three of the most effective substances known that are needed for real results. Most products use one or two of these important ingredients, but the makers of Hydroxatone® are the first to combine all three, resulting in the most advanced skin care and wrinkle reducer on the market.

Why Choose Hydroxatone®

PRODUCT	Hydroxatone®	Olay® Regenerist†	Strivectin SD®**
Argireline®§ Acetyl Hexapeptide 3	YES	NO	NO
Matrixyl™ 3000‡	YES	NO	NO
Hyaluronic Acid	YES	NO	NO

THREE Proven Wrinkle-Reducing Ingredients

Hydroxatone® is unlike any other skin cream you've ever tried because it relies on THREE proven ingredients for REAL results. Matrixyl™ 3000‡ is clinically proven to promote collagen production in the skin. Collagen is the most powerful substance known to help keep skin stay young, soft and vibrant. Argireline®§ is a combination of amino acids formulated to relax facial wrinkles, reduce the degree of existing wrinkles and stop their future development. And Hyaluronic Acid is virtually unmatched in hydrating the skin, resulting in increased smoothness, softening, elasticity and decreased facial wrinkles. But Hydroxatone® doesn't stop there! It also includes other natural antioxidants, botanicals, vitamins, and peptides and a gentle but powerful exfoliant...all to nourish your skin while fading wrinkles.

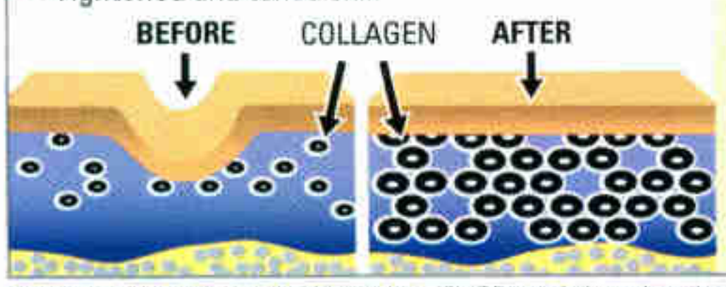
Up To 68% Reduction Of Deep Wrinkles

Unless you've actually tried Hydroxatone®, it's hard to imagine it can work the miracles users claim it does. But women and men of all ages are using Hydroxatone® and seeing real and noticeable results every day. The cumulative results that are seen within two weeks will continue with daily use. Over six months this will increase to as much as a 68% reduction in deep wrinkles.

HOW HYDROXATONE® WORKS

MATRIXYL™ 3000‡ + ARGIRELINE®§ + HYALURONIC ACID

- 68% reduction of deep wrinkles in just six months
- Diminished age spots & increased suppleness
- Enhanced production of healthy, radiant new skin
- Tightened and toned skin



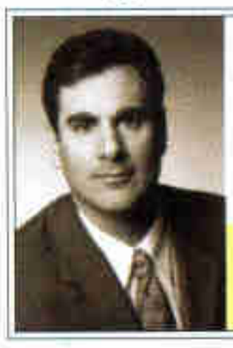
Matrixyl™ 3000‡ – is clinically proven to promote collagen production in the skin.

Argireline®§ – is a combination of amino acids formulated to relax facial wrinkles, reduce the degree of existing wrinkles and stop their future development.

Hyaluronic Acid – is virtually unmatched in hydrating the skin, resulting in increased smoothness, softening, elasticity and decreased facial wrinkles.

There Is No Comparison

Forget Botox®* or any other radical and dangerous treatments. Throw out other creams that simply don't work. Hydroxatone® is a proven anti-wrinkle cream that is completely safe and clinically proven. Within two weeks Hydroxatone® users will start to see results. With continued use, their skin will become softer, smoother, more radiant, and younger-looking...and that's GUARANTEED.



"I talk to so many women who would do almost anything to look younger. That is why I recommend Hydroxatone® to so many of my patients."

—Dr. Michael Fiorillo is a world renowned board certified plastic and reconstructive surgeon and codeveloper of Hydroxatone®.

Having A Hard Time Finding Hydroxatone®?

For years consumers have only had expensive and ineffective alternatives to achieve younger looking skin. You may have seen other inferior anti-wrinkle products costing hundreds of dollars at some high priced salons. Unlike those pricey and unproven alternatives, the manufacturer of Hydroxatone® is so confident in their anti-aging technology that they are offering a 30-day risk free trial offer...because seeing is believing!



To get your supply of Hydroxatone® risk free, for just a small S&H fee call **888-524-9109**. Our operators are available to let you try one of the greatest breakthroughs in wrinkle fighting technology without spending hundreds of dollars.

Call 888-524-9109 to get your Hydroxatone® 30-Day Risk Free Trial Offer Today!

Mention Promotion Code 2HNG11A for a Free Upgrade!

www.hydroxatonedirect.com

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How Can This Emerald Be Green and "Green" at the Same Time?

Our brilliant scientists found a planet-friendly way to bring you lavish 2.5 carat emeralds grown to perfection in the laboratory.



Set in gold vermeil with clear scientifically-grown DiamondAura accents and granulation.

The Queen of all precious gemstones. They have adorned the Crown Jewels and decorated the ornate royal thrones of dynasties dating back 3,000 years. As a symbol of opulence and romance they are without match. With their sparkling green luster, they are considered to be more precious than diamonds. And, carat for carat, they are the most expensive gems in the world. Ever since they were first found in Cleopatra's Mines and became the foundation of ancient Egypt's wealth, radiant, deep green emeralds of over 2 carats have been highly prized for their beauty and rarity.

Greener Green. But mining these stones is a dirty business. Stauer has found a better way. Our scientifically grown Emerald Collection originates from the intelligence of mankind rather than digging deep into the earth's surface. The win-win result is a high-carat emerald that's literally and figuratively green—flashing more color, clarity, and fire than emeralds from a mine but without the environmental damage, labor exploitation, and conflict sometimes associated with gemstone mining. And our scientifically grown emeralds are much more sensibly priced. Even trained gemologists have trouble separating the mined stones from the scientifically grown emeralds because their chemical composition is identical and optical and physical properties are so similar.

Clearly a desirable alternative! Being prone to inclusions by the very nature of their turbulent formation beneath the earth, a flawless mined emerald of 2.5 carats and good color is extremely expensive–costing potentially $40,000 or more. Our earth-friendly, scientifically grown emeralds are faultless and inclusion-free, enabling us to create pieces over 2 carats that radiate with rich, vibrant color but costing a lot less of your green!

To take advantage of the exceptional clarity of these lab-created stones, we chose the classic cushion cut. This romantic "antique" design, hugely popular again, plays up their breathtaking sparkle and light-reflecting qualities. Like their mined counterparts, our scientifically grown Emerald Collection adheres to the 4 C's of gemology—excellent cut, color, carat weight, and clarity.

Rare Jewelry from Science. This scientific process is quite complicated and calls for some very expensive lab equipment. We use a method called hydrothermal flux synthesis. This technique involves building the emerald crystal with high temperatures and pressures, with final crystallization occuring in a cooling chamber. This process is slow and expensive, so there is a limit to this production. We will make less than half of 1% of the mined carat count for emeralds this year.

Wear our cushion-cut, scientifically grown Emerald Collection for 30 days. If you aren't dazzled by its mind-over-mined magnificence, simply return the piece(s) to us for a full refund of the purchase price.

Not Available in Stores

Stauer lab-created *Emerald Collection*

A. Ring (2.5 ctw)—**$195** + S&H

B. Earrings (2.5 ctw)—**$225** + S&H

C. 18" Necklace (1.9 ctw)—**$195** + S&H

More green for less: Complete Set—$615 NOW ***only*** **$495**—Save $120 on the complete collection.

Available in ring sizes 5-10

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ENVIRONMENT



A greenbelt is one defense against sandstorms on the road to the Taklimakan oil field.

Unjust Deserts Sand stretches to the horizon, dunes rise more than 1,500 feet, and farmers flee their parched plots for work in the city. Welcome to northern China, where desertification—land degradation caused primarily by human activities—is wiping out close to a million acres of grassland a year (an area nearly as large as Rhode Island). Striving to feed 20 percent of the world's population, the Chinese have overgrazed, overfarmed, and created new deserts in the process. Since 1949 the country's 425 million agricultural workers have lost one-fifth of their arable land, and dust storms—the result of topsoil loss—now buffet Beijing. Greenpeace says a government-mandated tree-planting effort has been successful to a point, but that grass seeding and stricter land management are the best bets for an ecological recovery. Ironically, the urban migration might help in the short term: With fewer farmers and livestock, plants can put down roots again. *—Jarrett Wrisley*

Hot Topic



Of Dams and Damage The Three Gorges Dam spans the Yangtze River, holds back 10.3 trillion gallons of water, and may well be the world's largest producer of renewable energy. But China's biggest engineering project since the Great Wall is not without ecological—and humanitarian—controversy. The dam has pooled dangerously high levels of pollution from China's largest municipality, Chongqing, and has displaced more than a million people to hillside villages where landslides are common.

PHOTOS: GEORGE STEINMETZ (TOP); GILLES SABRIE, DIGITAL RAILROAD

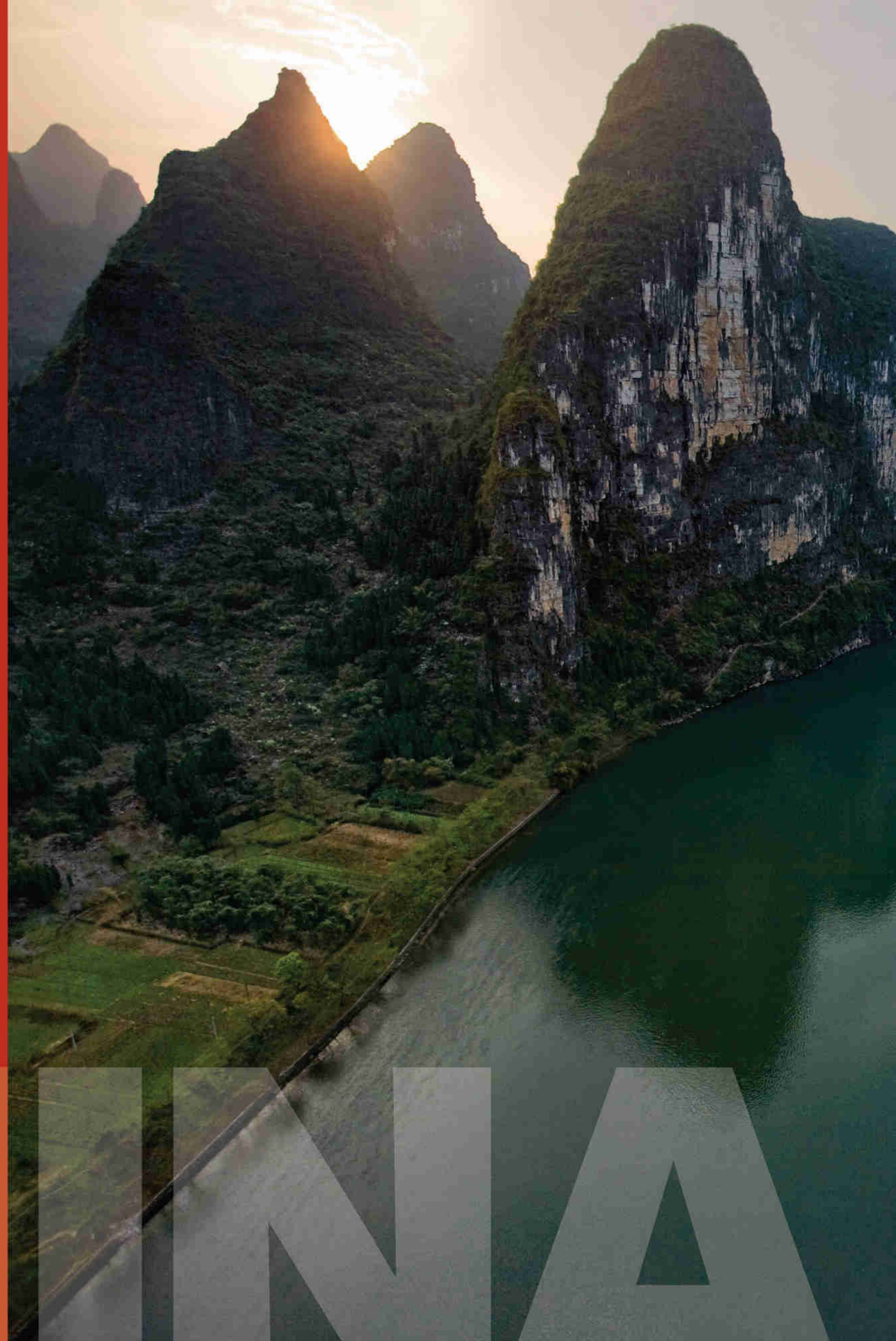




Holiday travelers pack the Guangzhou Railway Station in Guangdong Province.

INSIDE THE DRAGON

CHINA



In Guangxi, limestone pinnacles line the Li River.

GEORGE STEINMETZ

Newlyweds cruise with cartoon characters in Shanghai.



BY PETER HESSLER
PHOTOGRAPHS BY FRITZ HOFFMANN

MY STUDENTS WROTE ESSAYS on paper so cheap and thin that it felt like the skin of an onion. The brittle pages tore easily; if held to the light, they glowed. The English was flawed, but sometimes that only gave the words more power. "My parents were born in poor farmer's family," wrote a young man who had chosen the English name Hunt. "They told us that they had eaten barks, grass, etc. At that time grandpa and grandma had no open minds and didn't allow my mother to go to school because she is a girl." Another classmate described his mother: "Her hair becomes silver white, and some of her teeth become movable. But she works as hard as ever." Those were common themes—my students valued patience and diligence, and they liked to write about family. National events often left them perplexed. "I'm a Chinese, but I feel it difficult to see my country clearly," wrote a woman named Airane. "I believe there are many young people are as confused as I'm."

Her teacher felt the same way. In 1996 I had been sent to China as a Peace Corps volunteer, and that was the first time I had lived in the country and studied the language. The only thing I knew for certain was that the place was bound to change. Deng Xiaoping was still alive, although there were rumors that he was in poor health. Hong Kong still belonged to the British; China had yet to join the World Trade Organization; Beijing had recently failed in its bid to host the 2000 Olympics. On the middle Yangtze, the government was building the world's largest hydroelectric dam, the Three Gorges project, and I was assigned to a teaching job in Fuling, a small city that would be affected by the new dam. The Yangtze was visible from my classroom, and with every glimpse I wondered how this mighty river could ever become a lake.

In the beginning much of what I learned about China came from reading the onion-skin essays, layer by layer. The past could be

painful for my students—when they wrote about history, it was usually personal. Even a distant event like the 19th-century Opium War made them indignant, because the Chinese believed that such foreign aggression had initiated the country's long decline. When it came to modern disasters—the Great Leap Forward, the Cultural Revolution—they left much unsaid. "If I had been Mao Zedong," wrote a tactful student named Joan, "I wouldn't have let the thing happen between 1966 and 1976." But they refused to judge their elders. Eileen wrote: "Today, when we see [the Cultural Revolution] with our own sight, we'll feel our parents' thoughts and actions are somewhat blind and fanatical. But if we consider that time objectly, I think, we should understand and can understand them. Each generation has its own happiness and sadness. To younger generation, the important thing is understanding instead of criticizing."

They were the first Chinese to grow up in the post-Mao world. Most had been infants in 1978, when Deng Xiaoping initiated the free-market changes that eventually became known as Reform and Opening. Nearly all my students came from the countryside, and when they were small, the nation's population was still 80 percent rural. Many of their parents were illiterate; some of their grandmothers had bound feet. A number of my students were the first people from their villages to attend college.

They majored in English—a new subject for a nation hoping to overcome a history of troubled foreign relations. Ever since the Opium War the Chinese had wavered between perceiving the outside world as a threat or as an opportunity, until Mao's xenophobia resulted in over two decades of isolation. But Deng took the opposite approach, encouraging foreign trade, and in the 1990s all middle schools and high schools began to institute mandatory English courses. The nation faced a severe shortage of instructors, and most of my students would go on to teach in small-town schools.

Sometimes the old xenophobia flashed across their essays. Once, I assigned the topic "What Do You Hate?" and never had those brittle pages contained so much anger. They hated the Japanese for invading their country in the 1930s; they hated the Nationalist government for ruling Taiwan. "I hate all the countries in the world that abstruct our country developing," wrote Sean. History was personal, and so were international affairs; a student named Richard hated a man he had never met, the president of Taiwan. "Lee Teng-hui don't follow the mandate of the heaven and comply with the popular wishes of the people," Richard wrote. "He want Taiwan continue to be an independent kingdom which is under his control."

But already it was becoming more common for Chinese to see the outside world as an opportunity, and usually my students showed intense curiosity. They asked endless questions about American customs, laws, products. Don, who had grown up in one of the poorest homes of all my students, composed a letter to Robert J. Eaton, then the CEO of the Chrysler Corporation. "My hometown is Fengdu, I hope you have heard its name," Don wrote. "But my hometown's economy hasn't been developed. So I want to establish a factory for making cars and trucks." They were dreamers, and I could tell that some of them were bound to wander far from home. In every class certain students stood out, like a young woman named Vanessa. She was beautiful, and her English was among the best in the class, but mostly her ideas were different. "Someday, I will visit U.S. to see the wide, eternal Midwest Prairie," she wrote. "And I want to know what the Indians look like, and what kind of life they lead. 'Dance with Buffalo' is my dream."

AFTER FINISHING THE PEACE CORPS, I stayed in China as a writer, eventually spending more than a decade in the country. During that time I witnessed a number of major events: the death of Deng Xiaoping, the return of Hong Kong, the successful bid to host the 2008 Olympics.

Peter Hessler's third China book, Country Driving, *is forthcoming. Shanghai-based Fritz Hoffmann has been documenting change in the country since 1995.*

KAZAKHSTAN

RUSS

MONG

Altay

Karamay

Junggar Basin

Kuytun

Shihezi

Yining

Changji

Urumqi

KYRGYZSTAN

TIAN SHAN

Shanshan

Hami

Aksu

Korla

Tarim

Kashi

TAJIKISTAN

Yarkant

XINJIANG

TARIM BASIN

Taklimakan Desert

Kumtag Desert

GANSU

Jiayuguan

Badain Jaran Desert

Hotan

ALTUN MOUNTAINS

Jinchang

Wuwei

KUNLUN MOUNTAINS

QAIDAM BASIN

Qinghai Lake

Xining

Golmud

QINGHAI

Lanzhou

Linxia

BAYAN HAR MOUNTAINS

Yellow (Huang)

PLATEAU OF TIBET

CHI

NGANGLONG RANGE

GANGDISE RANGE

TANGGULA RANGE

Yangtze

TIBET

SICHUAN

INDIA

NEPAL

Lhasa

Brahmaputra

World's highest point

Mount Everest
29,035 ft
8,850 m

HENGDUAN MOUNTAINS

Yaan

Leshan

BHUTAN

Xichang

Shangri-La

Zhaotong

Ganges

Panzhihua

Dali

Baoshan

Kunming

Haikou

BANGLADESH

YUNNAN

Kaiyuan

Gejiu

TROPIC OF CANCER

Mekong

MYANMAR (BURMA)

Salween

LAOS

THAILAND

Bay of Bengal

Boundary claimed by India

Boundary claimed by Pakistan

Boundary claimed by China

CITY POPULATION

Beijing	More than 5 million
Guangzhou	3 to 5 million
Lanzhou	1 to 3 million
Lishui	Fewer than 1 million

More than 100 cities in China have a population of at least 1 million, twice the number than in 1980.

S I A

O L I A

G O B I

INNER MONGOLIA

GREATER KHINGAN RANGE

LESSER KHINGAN RANGE

HEILONGJIANG

JILIN

LIAONING

HEBEI

BEIJING

TIANJIN

SHANXI

NINGXIA

SHAANXI

HENAN

SHANDONG

ANHUI

JIANGSU

SHANGHAI

ZHEJIANG

HUBEI

HUNAN

JIANGXI

FUJIAN

GUIZHOU

GUANGXI

GUANGDONG

CHONGQING

TAIWAN

HAINAN

HONG KONG

MACAU

NORTH KOREA

SOUTH KOREA

JAPAN

Sea of Japan (East Sea)

Korea Bay

Bo Hai

Yellow Sea

East China Sea

South China Sea

Taiwan Strait

Korea Strait

Tsushima Strait

Philippine Sea

Gulf of Tonkin

Yellow (Huang)

Yangtze

Pearl R.

Songhua

Baiyang Lake

Tai Lake

Three Gorges Dam

Mu Us Desert

Loess Plateau

HELAN MTS.

QINLING MTS.

YAN MTS.

Heihe

Yakeshi

Hailar

Nehe

Beian

Yichun

Fujin

Zalantun

Qiqihar

Hailun

Jiamusi

Baoshan

Tieli

Qitaihe

Daqing

Anda

Zhaodong

Hulan

Harbin

Shuangcheng

Didao

Jixi

Hengshan

Mudanjiang

Ulanhot

Baicheng

Taonan

Songyuan

Fuyu

Yushu

Jishu

Dehui

Jiutai

Jilin

Changchun

Gongzhuling

Dunhua

Yanji

Huadian

Tongliao

Siping

Liaoyuan

Meihekou

Kaiyuan

Tieling

Hunjiang

Tonghua

Fushun

Shenyang

Anshan

Xilinhot

Chifeng

Jining

Chengde

Jinzhou

Yingkou

Fengcheng

Dandong

Zhangjiakou

Chengziyu

Huludao

Qinhuangdao

Wafangdian

Linhe

Hohhot

Baotou

Xuanhua

Beijing

Tangshan

Jinzhou

Dalian

Datong

Tianjin

Tanggu

Dongsheng

Shuozhou

Lianggezhuang

Wuda

Wuhai

Shizuishan

Baoding

Xinzhou

Shijiazhuang

Binzhou

Kenli

Yantai

Weihai

Wendeng

Zhaoyuan

Laiyang

Dezhou

Weifang

Yinchuan

Qingtongxia

Wuzhong

Yukou

Taiyuan

Yuci

Linqing

Zibo

Boshan

Qingdao

Xingtai

Jinan

Handan

Anyang

Xintai

Rizhao

Yanan

Changzhi

Baiyin

Maqu

Pingliang

Linfen

Houma

Puyang

Jining

Heze

Linyi

Xinxiang

Weishan

Lianyungang

Jiaozuo

Zhengzhou

Shangqiu

Xuzhou

Tongchuan

Yuncheng

Luoyang

Bozhou

Huaibei

Suqian

Yancheng

Huaiyin

Tianshui

Xianyang

Weinan

Xian

Pingdingshan

Luohe

Jieshou

Zhoukou

Suzhou

Bengbu

Xinghua

Dongtai

Taizhou

Nantong

Fuyang

Huainan

Zhenjiang

Jiangyin

Nanjing

Hefei

Wuxi

Suzhou

Shanghai

Hanzhong

Ankang

Shiyan

Laohekou

Zaoyang

Xinyang

Luan

Nanyang

Xiangfan

Suizhou

Guangshui

Macheng

Anqing

Jiaxing

Hangzhou

Shaoxing

Yuyao

Ningbo

Zhuji

Guangyuan

Mianyang

Daxian

Deyang

Nanchong

Chengdu

Three Gorges Dam

Yichang

Zhicheng

Yingcheng

Wuhan

Xiaogan

Ezhou

Huangshi

Xiantao

Xianning

Shashi

Jianli

Shishou

Puqi

Yueyang

Jiujiang

Jingdezhen

Jinhua

Jiaojiang

Luqiao

Lishui

Qiaotou

Wenzhou

Ruian

Changde

Yiyang

Nanchang

Shangrao

Yingtan

Linchuan

Changsha

Jishou

Xiangtan

Zhuzhou

Xinyu

Shaowu

Loudi

Nanping

Zhenxiong

Zunyi

Huaihua

Pingxiang

Jian

Sanming

Fuzhou

Keelung

Taipei

Hsinchu

Taichung

Taitung

Tainan

Kaohsiung

Pingtung

Penghu Is.

Shaoyang

Hengyang

Leiyang

Ganzhou

Xianyou

Putian

Quanzhou

Zhangzhou

Xiamen

Longyan

Chenzhou

Lupanshui

Guiyang

Kaili

Dimen

Anshun

Xuanwei

Zhanyi

Qujing

Xingyi

Guilin

Lechang

Shaoguan

Meizhou

Raoping

Shantou

Jieyang

Chongqing

Fengdu

Fuling

Zigong

Luzhou

Yibin

Liuzhou

Hechi

Wuzhou

Qingyuan

Huizhou

Jieshi

Haimen

Shenzhen

Hong Kong

Guangzhou

Nanning

Yulin

Dongzhen

Gaozhou

Maoming

Jiangmen

Macau

Qinzhou

Beihai

Zhanjiang

Leizhou

Yangjiang

Haikou

Sanya

VIETNAM

HAINAN

PHILIPPINES

SCALE 1:16,500,000

1 CENTIMETER = 165 KILOMETERS; 1 INCH = 260 MILES

0 mi 400

0 km 400

NGM MAPS

Chinese history has become the story of average citizens. But there are risks when a nation depends on the individual dreams of 1.3 billion people rather than a coherent political system with clear rule of law.

Occasionally the old anger flared up, like the massive demonstrations that followed NATO's bombing of the Chinese Embassy in Belgrade in 1999. That same year, protests by Falun Gong practitioners made headlines; a few years later the outbreak of SARS briefly occupied the world's attention.

But these incidents were most remarkable for how little they affected the lives of average Chinese. It was different from the narrative of the 20th century: After 1900, when the Boxer Rebellion swept across Beijing, every decade included at least one major political upheaval. Usually these events were violent, ranging from the Japanese invasion to the Cultural Revolution to the massacre around Tiananmen Square in 1989. Together they made for a troubled century, which was why my students wrote so delicately about the past.

Perhaps this awareness of a painful history was also why the 1990s turned out differently. It became modern China's first decade without a major upheaval, and thus far the 21st century has also been peaceful. And yet despite the lack of political change, the nation has been radically transformed. For three decades the economy has grown at an average annual rate of nearly 10 percent, and more people have been lifted out of poverty than in any other country, at any other time. China has become home to the largest urbanization in human history—an estimated 150 million people have left the countryside, mostly to work in the factory towns of the coast. By most measures the nation is now the world's largest consumer, using more grain, meat, coal, and steel than the United States. But apart from Deng Xiaoping, it's difficult to credit these critical changes to any specific government official. The Communist Party's main strategy has been to unleash the energy of the people, at least in the economic sense. In today's China, government is decentralized, and people can freely start businesses, find new jobs, move to new homes. After a century of powerful leaders and political turmoil, Chinese history has become the story of average citizens.

But there are risks when a nation depends on the individual dreams of 1.3 billion people rather than a coherent political system with clear rule of law. China faces an environmental crisis—the nation has become the world's leading emitter of carbon dioxide, and there's a serious shortage of water and other basic resources. The gap between rich and poor has become dangerously wide. The difference between urban and rural incomes is greater than three to one—the largest since the reforms began in 1978. Each of these problems is far too broad to be solved, or even grasped, by the average citizen. And because the government continues to severely restrict political freedom, people are accustomed to avoiding such issues. My students taught me that everything was personal—history, politics, foreign relations—but this approach creates boundaries as well as connections. For many Chinese, if a problem doesn't affect them personally, it might as well not exist.

Over the years I've stayed in touch with more than one hundred of my former students. The cheap onionskin paper is long gone; today they communicate by email and cell phone. Most are still teaching, and they live in small

cities—part of the new middle class. Because of migration, their old villages are dying, like rural regions all across China. "Only old people and small children are left at home," a woman named Maggie recently wrote. "It seems that the countryside now is under Japanese attacks, all the people have fled."

Although my students were patient with the flaws of their elders, today they seem to feel a greater distance from the young people they teach. "When we were students there wasn't a generation gap with the teachers," wrote Sally. "Nowadays our students have their own viewpoints and ideas, and they speak about democracy and freedom, independence and rights. I think we fear them instead of them fearing us." A classmate pointed out that most of today's students come from one-child homes, and many have been spoiled by indulgent parents. "We had a pure childhood," wrote Lucy. "But now the students are different, they are more influenced by modern things, even sex. But when we were young, sex was a tatoo for us."

Recently I sent out a short questionnaire asking how their lives have changed. Responses came from across the country, ranging from Zhejiang Province on the east coast to Tibet in the far west. Most described their material lives as radically different. "When I graduated in 1998, I told my Mum, if I got 600 yuan [about $70] each month, I would be satisfied," Roger wrote. "In fact I got 400 yuan then, and now each month I get about 1700 yuan." When I asked about their most valuable possession, 70 percent said that they had bought an apartment, usually with loans. One had recently purchased a car. They were still optimistic. When I asked them to rate their feelings about the future on a scale of one to ten, with ten being the most positive, the average response was 6.5.

I asked what worried them the most. Several mentioned relationships; one woman wrote: "The marriage is not safe any more in China, it is more common for people around here to break up." A couple of respondents who now work far from home were concerned about their status as migrants. "I am like a foreigner in China," Willy wrote. But the most common source of worry seemed to be mortgage payments. "Ten years ago, I worried that I could not have a good and warm family," Belinda wrote. "Now I am worried about my loan at the bank." None of her classmates expressed concern about political reform, foreign relations, or any other national issue. Nobody mentioned the environment.

FOR YEARS I didn't hear from Vanessa. Finally, half a decade after I had taught her, I received an email. She had found a sales position with a company that produced electronic components: "I am changed a lot. I am in Shenzhen now, which is a big city in China.... Do you know American companies like America II or Classic components corp? They are our customers. I am little proud to have opportunity to co-operate with them. Because they are very big companies in the world, President Bush even visited America II last year. And the big reason I like my work now is I can use my language I learned."

The next time I was in Shenzhen, we met in the lobby of the Shangri-La Hotel. "Did you see my car?" Vanessa said, and then she looked disappointed that I had missed her arrival. She explained that her fiancé had just given her the vehicle as a gift. "He's the boss of my company," she said.

She was still quite pretty, and I couldn't help but conjure a stereotypical boss image: a leering man in his 50s, smoking Chunghwa cigarettes and shouting into a cell phone. But I said I'd like to meet him.

"Oh, he's waiting," Vanessa said. "He had to drive, because I don't have my license yet. I've been too busy!"

We walked outside. In the parking lot sat a silver BMW Z4 3.0i convertible coupe—in China, a hundred-thousand-dollar car. I peered inside: no cigarettes, no cell phone. Crew cut, acne, rumpled clothes. He smiled politely, stepped out of the car, and shook my hand. The company boss was all of 27 years old.

Behind the Pictures Photographer Fritz Hoffmann shares stories about his images at **ngm.com.**



GEORGE STEINMETZ

CHANGING OF THE GUARD Stark against late winter snow, ramparts of brick and stone twist through mountains north of Beijing. Ancient emblem of the Middle Kingdom's determination to protect itself from outsiders, the Great Wall now stands among China's greatest global tourist attractions.



GEORGE STEINMETZ

PRIVATE PROPERTY Patio chairs and a satellite dish (lower left) mark one home as claimed in a new suburban development in Shenyang. The Chinese government estimates that the country is adding five to six billion square feet of floor space to its residential and commercial building stock every year.


AURORA



CITY ON FIRE From a construction crane 94 stories up, Shanghai's streets and skyscrapers seem incandescent with capitalism. One of every 20 dollars of China's GDP is generated in this city, and a fifth of the nation's exports—up 500 percent in real value since 1992—pass through its portals.

China's one-child policy created a generation of only children that numbers 90 million. 119 baby boys are born for every 100 girls. The number of unmarried young men—called bare branches—is predicted to be 30 million by 2020. 45 percent of Chinese women surveyed say they do not want to give up their careers to get married. Three in ten Chinese families have grandparents living in the same household. Beijing enforces a one-dog policy that prohibits pets more than 14 inches high.

China by the Numbers Sources for statistics cited can be found at **ngm.com.**



Sporting a souvenir headdress, purple wings, and a wand, grinning eight-year-old Zhou Yingqi poses for her mother before the Forbidden City. The family traveled more than 600 miles from Daqing to Beijing for the October National Day holiday celebrating the 1949 founding of the People's Republic of China.



PLUSH LIFE Some fur coats included paws and a pedigree at Shanghai's second Millionaire Fair. Diamond-studded cell phones and French chocolates vied with the Naughty Family Pet Company's $100,000 purebreds for the attention of 11,000 guests—China's new breed of conspicuous consumer.



WORLD AWAY As summer shadows grow long, a Yi woman in traditional dress watches children play. Her small Yunnan village, like other rural communities where many members of China's 55 ethnic minorities live, remains largely untouched by the economic and social changes now transforming the east.





HOT JOBS Mix intense heat with oil, and woks turn to cauldrons of flame as students prepare vegetables at Hefei's Anhui New East Cuisine Institute. With entertainment spending exploding, top Chinese chefs can earn nearly as much in Beijing and Shanghai as they could in New York City.

China is expected to overtake the U.S. as the world's largest economy in ten years. China has the world's highest number of annual deaths triggered by air pollution. **Urban Chinese earn more than three times as much as those in rural areas, the highest income gap since the start of reforms in 1978.** Public protests rose by 50 percent last year. **One in four residents of Beijing is a migrant from the country.** 67 percent of millionaires surveyed say they are sacrificing health for money.



In a fog of its own noxious waste, the gargantuan Anshan metalworks in Liaoning Province churns out millions of tons of steel each year. China produces—and consumes—nearly a third of the world's steel, more than longtime industrial powers Japan, Germany, and the United States combined.

GEORGE STEINMETZ





BLOWING BUDGETS Drilling holes for explosives that will pulverize the ground, workers build a new science museum for Chongqing. In the first half of last year alone, this vast municipality of 31 million people amassed 4.5 billion dollars in revenues—and spent 357 million dollars more than it collected.





MASS PRODUCTION Packed between assembly and shipping buildings at Shenzhen's Boji Christmas tree factory, some 2,000 workers assembled for a portrait at the morning shift change in July 2006. In its heyday, according to managing director Billy Chau, Boji exported 1.6 million trees to the U.S. each year.


小学生
日常行为规范
小学生
日常行为规范
小学生
日常行为规范
小学生
日常行为规范



SCRIPTING THE FUTURE Students in rural Shaanxi Province practice strokes that form Chinese characters under the watchful eyes of Sun Yat-sen, Mao, and Zhou Enlai. Major education investment has pushed the national literacy rate to 91 percent, but some 85 million Chinese still can't read and write.

China has the world's largest number of Internet users—220 million—surpassing Web surfers in the U.S. Authorities have added 171 new pop culture phrases to China's national language registry. 31 percent of Chinese 16 or older say they are religious, four times the official estimate a decade ago. Cell phones in China have grown from 87 million in 2000 to 432 million today. 32 percent of Chinese say the Internet broadens their sex life, compared with 11 percent in the U.S.



Therapists in Guangzhou use what they call “nanometer wave machines” to treat addictions. One patient (second from right) is part of a program for Internet addicts—young Chinese so devoted to gaming and other online activities that parents and government officials fear for their health, and their sanity.





OPEN SPACE Locals call them space capsules. For $14 a night, the beachball-striped cabins sheltered Ma Shengying (at right) and city friends from Xining, 80 miles away, on a visit to Qinghai's Kanbula National Geopark. As their personal incomes grow, Chinese are traveling more.



HERDING FAMILIES The Maqu horse festival in Gansu Province—part race, part county fair—draws nomads into town, briefly. The Sahe Nomads New Village (background) was built by the government to house ethnic Tibetans relocated from grasslands they have long used to pasture livestock.





LANDMARK MOMENT On a summer road trip to Lhasa—1,500 air miles west of their home in Nanchang—thirtysomething parents Wang Fang (right) and Luo Jun, and nine-year-old son Wenhao, stopped to admire a soaring bridge along the newly completed rail route that connects Beijing to the Tibetan capital. □

Twentysomethings with money to burn congregate at the Babyface club on Guangzhou's Pearl River. The $12 Flaming Lamborghini is one of the club's most popular drinks.

China's sudden prosperity
brings undreamed-of
freedoms and new anxieties.

GILDED AGE GILDED CAGE

BY LESLIE T. CHANG
PHOTOGRAPHS BY RANDY OLSON

AT THE AGE OF FOUR, Zhou Jiaying was enrolled in two classes—Spoken American English and English Conversation—and given the English name Bella. Her parents hoped she might go abroad for college. The next year they signed her up for acting class. When she turned eight, she started on the piano, which taught discipline and developed the cerebrum. In the summers she went to the pool for lessons; swimming, her parents said, would make her taller. Bella wanted to be a lawyer, and to be a lawyer you had to be tall.

By the time she was ten, Bella lived a life that was rich with possibility and as regimented as a drill sergeant's. After school she did homework unsupervised until her parents got home. Then came dinner, bath, piano practice. Sometimes she was permitted television, but only the news. On Saturdays she took a private essay class followed by Math Olympics, and on Sundays a piano lesson and a prep class for her entrance exam to a Shanghai middle school. The best moment of the week was Friday afternoon, when school let out early. Bella might take a deep breath and look around, like a man who discovers a glimpse of blue sky from the confines of the prison yard.

For China's emerging middle class, this is an age of aspiration—but also a time of anxiety. Opportunities have multiplied, but each one brings pressure to take part and not lose out, and every acquisition seems to come ready-wrapped in disappointment that it isn't something newer and better. An apartment that was renovated a few years ago looks dated; a mobile phone without a video camera and color screen is an embarrassment. Classes in colloquial English are fashionable among Shanghai schoolchildren, but everything costs money.

Freedom is not always liberating for people who grew up in a stable socialist society; sometimes it feels more like a never ending struggle not to fall behind. A study has shown that 45 percent of Chinese urban residents are at health risk due to stress, with the highest rates among high school students.

Fifth grade was Bella's toughest year yet. At its end she would take entrance exams for middle school. Every student knew where he or she ranked: When teachers handed back tests, they had the students stand in groups according to their scores. Bella ranked in the middle—12th or 13th in a class of 25, lower if she lost focus.

She hated Japan, as her textbooks had taught her to: The Japanese army had killed 300,000 Chinese in the 1937 Nanjing massacre. She hated America too, because it always meddled in the affairs of other countries. She spoke a fair amount of English: "Men like to smoke and drink beer, wine, and whiskey." Her favorite restaurant was Pizza Hut, and she liked the spicy wings at KFC. Her record on the hula hoop was 2,000 spins.

The best place in the world was the Baodaxiang Children's Department Store on Nanjing Road. In its vast stationery department, Bella would carefully select additions to her eraser collection. She owned 30 erasers—stored in a cookie tin at home—that were shaped like flip-flops and hamburgers and cartoon characters; each was not much bigger than a thumbnail, and all remained in their original plastic packaging. When her grandparents took her to the same store, Bella headed for the toy section, but not when she was with her parents. They said she was too old for toys.

If Bella scored well on a test, her parents bought her presents; a bad grade brought a clampdown at home. Her best subject was Chinese, where she had mastered the art of the composition: She could describe a household object in a morally uplifting way.



Chinese society is changing so fast that children and parents inhabit different worlds. "They are open-minded," says 15-year-old Bella Zhou of her parents, "but there is still a generation gap."

Last winter Grandmother left her spider plant outdoors and forgot about it.... This spring it actually lived. Some people say this plant is lowly, but the spider plant does not listen to arbitrary orders, it does not fear hardship, and in the face of adversity it continues to struggle. This spirit is worthy of praise.

She did poorly in math. Extra math tutoring was a constant and would remain so until the college entrance examination, which was seven years away. You were only as good as your worst subject. If you didn't get into one of Shanghai's top middle schools, your fate would be mediocre classmates and teachers who taught only what was in the textbook. Your chances of getting into a good high school, not to mention a good college, would diminish.

You had to keep moving, because staying in place meant falling behind. That was how the world worked even if you were only ten years old.

THE PAST DECADE has seen the rise of something Mao sought to stamp out forever: a Chinese middle class, now estimated to number between 100 million and 150 million people. Though definitions vary—household income of at least $10,000 a year is one standard—middle-class families tend to own an apartment and a car, to eat out and take vacations, and to be familiar with foreign brands and ideas. They owe their well-being to the government's economic policies, but in private they can be very critical of the society they live in.

The state's retreat from private life has left people free to choose where to live, work, and travel, and material opportunities expand year by year. A decade ago most cars belonged to state enterprises; now many families own

one. In 1998, when the government launched reforms to commercialize the housing market, it was the rare person who owned an apartment. Today home ownership is common, and prices have risen beyond what many young couples can afford—as if everything that happened in America over 50 years were collapsed into a single decade.

But pick up a Chinese newspaper, and what comes through is a sense of unease at the pace of social change. Over several months in 2006, these were some of the trends covered in the *Xinmin Evening News,* a popular Shanghai daily: High school girls were suffering from eating disorders. Parents were struggling to choose a suitable English name for their child. Teenage boys were reading novels with homosexual themes. Job seekers were besieging Buddhist temples because the word for "reclining Buddha," *wofo,* sounds like the English word "offer." Unwed college students were living together.

Parents struggle to teach their children but feel their own knowledge is obsolete; children, more attuned to social trends, guide their parents through the maze of modern life. "Society has completely turned around," says Zhou Xiaohong, a sociologist at Nanjing University who first noticed this phenomenon when his own father, a retired military officer, asked him how to knot a Western tie. "Fathers used to give orders, but now fathers listen to their sons."

Because their parents have such high hopes for them, children are among the most pressured, inhabiting a world that combines old and new and features the most punishing elements of both. The traditional examination system that selects a favored few for higher education remains intact: The number of students entering college in a given year is equal to 11 percent of the college-freshman-age population, compared with 64 percent in the United States. Yet the desire to foster well-rounded students has fed an explosion of activities—music lessons, English, drawing, and martial arts classes—and turned each into an arena of competition.

Such pursuits bring little pleasure. English ability is graded on five levels stretching through college, and parents push children to pass tests years ahead of schedule. Cities assess children's piano playing on a ten-level scale. More than half of preteens take outside classes, a survey found, with the top reason being "to raise the child's future competitiveness."

Parents tend to follow trends blindly and to believe most of what they hear. The past is a foreign country, and the present too.

Because parents have such high hopes for them, children are among the most pressured, inhabiting a world that combines old and new—and the most punishing of both.

"WE ARE A TRADITIONAL FAMILY" was how Bella's mother, Qi Xiayun, introduced herself when I first met her in 2003. She was 33 years old with the small, pale face of a girl, and she spoke in a nonstop torrent about the difficulty of raising a child. She teaches computer classes at a vocational college; her husband works in quality control at Baosteel, a state-owned company. They were appointed to those jobs after college, as part of the last generation to join the socialist workforce before it started to break apart.

Bella's parents met the old-fashioned way, introduced by their parents. But after they had Bella in 1993, they turned their backs on tradition. They chose not to eat dinner with their in-laws every night and rejected old-fashioned child-rearing methods that tend to coddle children.

When Bella was not yet two, her grandmother offered to care for the baby, but her mother worried that the grandparents would spoil her. Bella went to day care instead. When she entered third

Leslie T. Chang lived in China for a decade. Her book Factory Girls *will be coming out later in 2008. Randy Olson, who has been named both Magazine and Newspaper Journalist of the Year, has been shooting for* National Geographic *for 15 years.*

grade, her mother stopped picking her up after school, forcing her to change buses and cross streets alone. "Sooner or later she must learn independence," her mother said.

So Bella grew up, a chatty girl with Pippi Longstocking pigtails and many opinions—too many for the Chinese schoolroom. In second grade she and several classmates marched to the principal's office to demand more time to play; the protest failed. Her teachers criticized her temper and her tendency to bully other children. "Your ability is strong," read a first-grade report card, "but a person must learn from the strengths of others in order to improve." In second grade: "Hope you can listen to other people's opinions more."

The effort to shape Bella is full of contradictions. Her parents encourage her independence but worry that school and the workplace will punish her for it. They fret over her homework load, then pile more assignments on top of her regular schoolwork. "We don't want to be brutal to her," says Bella's father, Zhou Jiliang. "But in China, the environment doesn't let you do anything else."

Bella teaches her parents the latest slang and shows them cool Internet sites. When they bought a new television, Bella chose the brand. When they go out to eat, Bella picks Pizza Hut. One day soon, her parents worry, her schoolwork will move beyond their ability to help her. When Bella was younger, her parents began unplugging the computer keyboard and mouse so she wouldn't go online when she was home alone, but they knew this wouldn't last.

Recently, Bella's father and his sister and cousins put their grandfather in a nursing home. It was a painful decision; in traditional China, caring for aged parents was an ironclad responsibility, and Bella's parents have extra room in their apartment for their parents to move in some day. But Bella announced that she would one day put her parents in the best nursing home.

"The minute she said that, I thought: It's true, we don't want to be a burden on her," Bella's father says. "When we are old, we'll sell the house, take a trip and see the world, and enter the nursing home and live a quiet life there. This is the education my daughter gives me."

I WENT TO SCHOOL WITH BELLA one Friday in her fifth-grade year. She sat up in bed at 6:25, pulled on pants and an orange sweatshirt, and tied a Young Pioneers kerchief around her neck. Her parents rushed through the cramped apartment getting ready for work, and breakfast was lost in the shuffle. Bella's mother walked her to the corner, then Bella sighed and headed to the bus stop alone. "This is the most free I am the whole day."

Today there would be elections for class cadres, positions that mirror those in the Communist Party. "My mother says to be a cadre in fifth grade is very important," Bella said.

The bus dropped us off at the elite Yangpu Primary School, which cost $1,200 a year in tuition and fees and rejected 80 percent of its applicants. Her classroom was sunny and loud with the roar of children kept indoors. It had several computers and a bulletin board with student-written movie reviews: *The Birth of New China, Finding Nemo.*

By 8:30 the students were seated at their desks for elections. Their pretty young teacher asked for candidates. Everyone wanted to run.

"This semester I want to change my bad nail-biting habits, so people don't call me the Nail-Biting King," said a boy running for propaganda officer.

"I will not interrupt in class," said a girl in a striped sweater running for children's officer. "Please everyone vote for me."

The speeches followed a set pattern: Name a personal flaw, pledge to fix it, and ask for votes. It was self-criticism as campaign strategy.

Those who strayed from the script were singled out. "My grades are not very good because I write a lot of words wrong," said one girl running for academic officer. "Please everyone vote for me."

"You write words wrong, please vote for me?" the teacher mimicked. "What have you left out?"

The girl tried again. "I want to work to fix this bad habit. Please everyone vote for me."

Bella delivered her pitch for sports officer. "I am very responsible, and my management abilities are pretty good," she said breathlessly. "Sometimes I have conflicts with other students. If you vote for me, it will help me change my bad habits. Please everyone give me your vote."

In a three-way race, Bella squeaked to victory by a single ballot. Election day, like everything in school, ended with a moral. "Don't feel bad if you lost this time," the teacher said. "It just means you must work even harder. You shouldn't let yourself relax just because you lost."

THE LANGUAGE OF CHILD EDUCATION is Darwinian-grim. "The elections teach students to toughen themselves," Bella's teacher, Lu Yan, said over lunch in the teachers' cafeteria. "In the future they will face pressure and competition. They need to know how to face defeat."

Some schools link teacher pay to student test performance, and the pressure on teachers is intense. Bella's class had recently seen a drop in grades, and the teacher begged parents to help identify the cause. Lu Yan had just gotten her four-year college degree at night school and planned to study English next. All her colleagues were enrolled in outside classes; even the vice-principal took a weekend class on educational technology. A math teacher was fired three weeks into the school year because parents complained she covered too little material in class.

Life will not always feel like this. The next generation of parents, having grown up with choice and competition, may feel less driven to place all their hopes on their children. "Right now is the hardest time," says Wang Jie, a sociologist who is herself the mother of an only child. "In my generation we have both traditional and new ideas. Inside us the two worlds are at war."

In math class later that day, the fifth graders whipped through dividing decimals using Math Olympics methods, which train kids to use mental shortcuts. *(Continued on page 93)*





The arrival of Shanghai's Three on the Bund retail complex means 32-year-old headhunter Rachel Zhu (right) no longer has to travel abroad for her favorite designer labels. This green frock had a $2,200 price tag.


招商銀行
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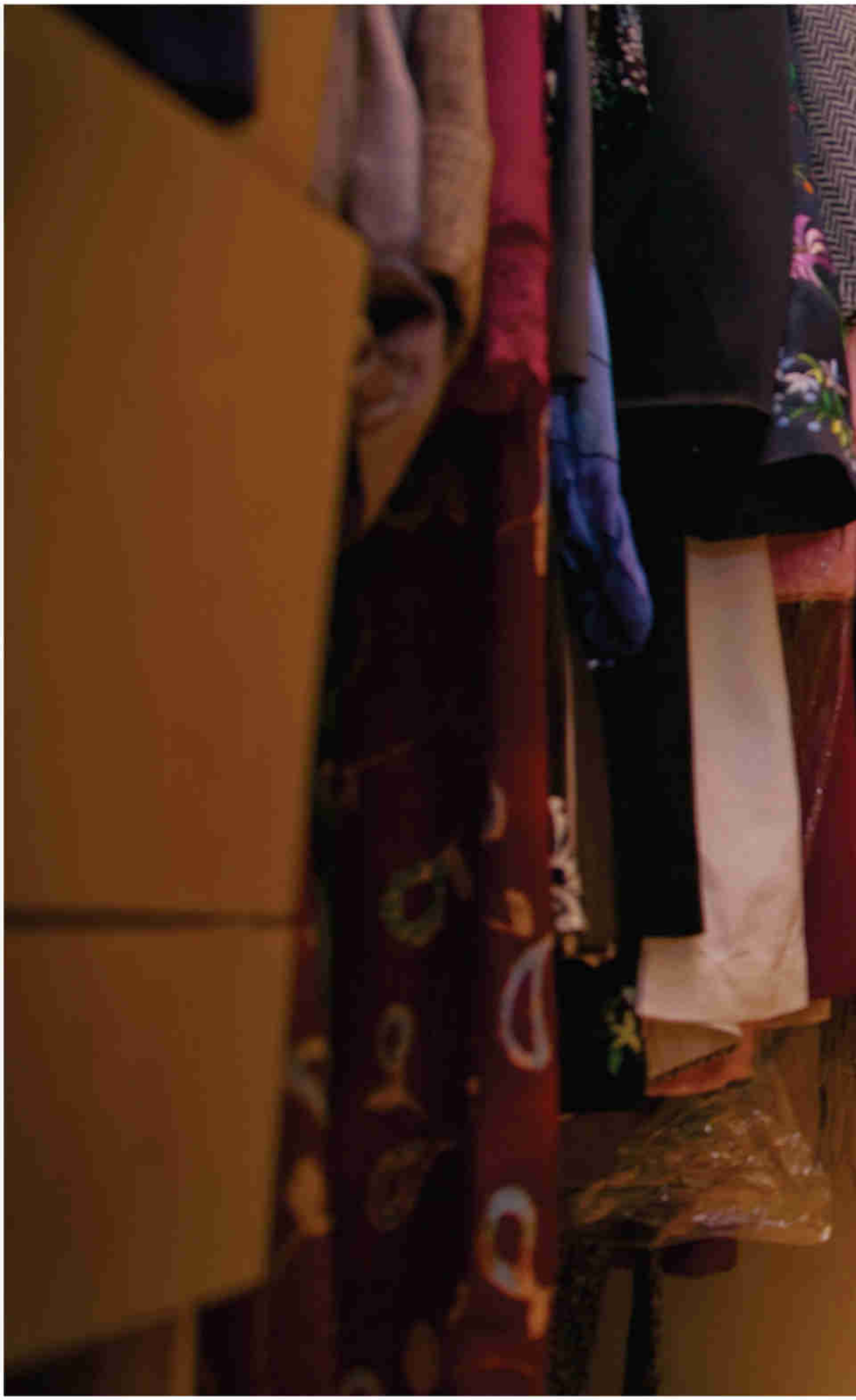


A mile west of Tiananmen Square, the Xidan district in downtown Beijing has been a commercial area crowded with shops since the Ming dynasty.





Crocodiles with their jaws taped shut roam the cavernous lobby of Guangzhou's Yumin seafood restaurant before ending up on customers' plates. The pricey, exotic meat—steamed, braised, or stewed—is believed to cure coughs and prevent cancer. "People don't care about the cost," says manager Wang Jianfei. "They just care about health."

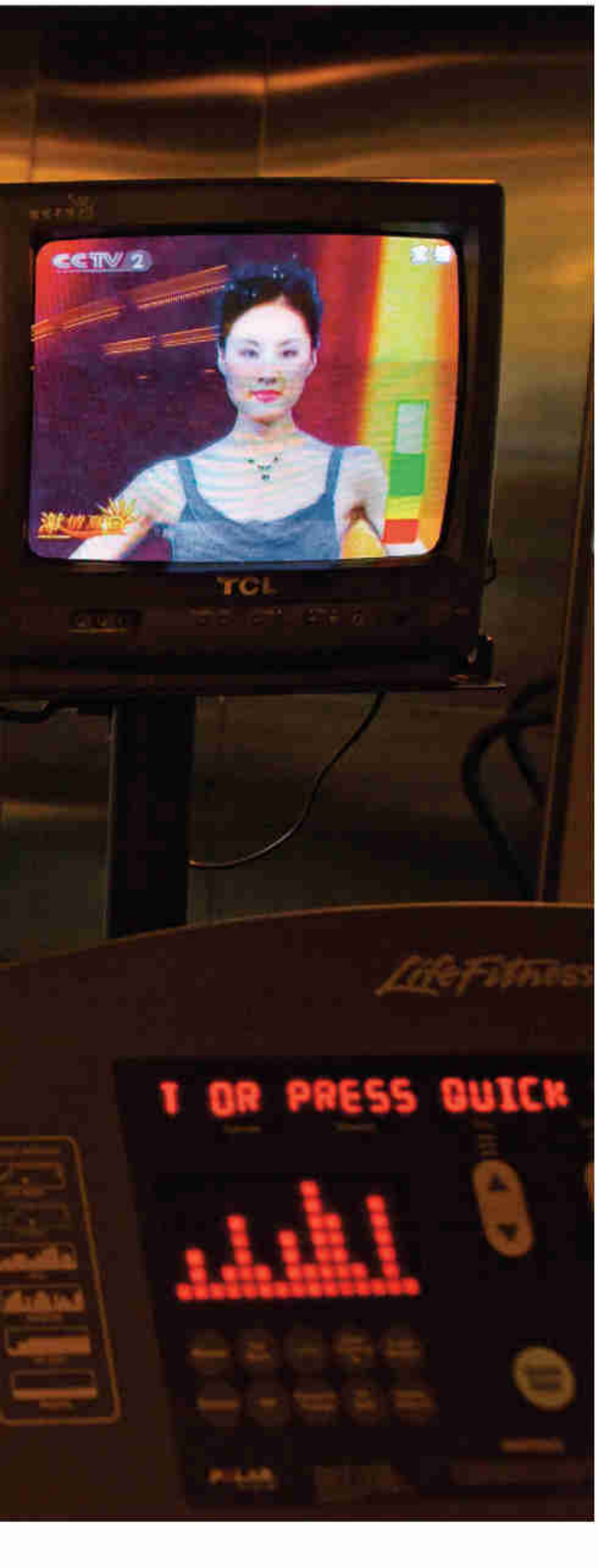


Since moving to Shanghai from Hong Kong three years ago, Yvonne Lo, 32, has rarely worn the same outfit twice. Lo runs a chain of boutique spas in Shanghai that offer 13 types of facials, plus a chocolate pedicure for $48.





Health clubs are surging in popularity, partly as an antidote to work stress. The Total Fitness Club, with 11 branches in Guangzhou, offers six kinds of yoga and classes in salsa and pole dancing.



(Continued from page 84) They raced across a field in gym class, with the slowest person in each group punished with an extra lap around the track. School ended at 1:30 on Fridays. The bus let Bella off outside her building, where she bought a Popsicle and headed inside. Her weekend was packed with private tutoring, so Friday was the best time to finish her homework.

I told her that no American ten-year-old did homework on a Friday afternoon.

"They must be very happy," Bella said.

IN THE FIVE YEARS since I met Bella and her family, their lives have transformed. They moved into a new three-bedroom apartment—it is almost twice the size of their old one, which they now rent out—and furnished it with foreign brand-name appliances. They bought their first car, a Volkswagen Bora, and from taking the bus they went straight to driving everywhere. They eat out a couple of times a week now, and the air-conditioner stays on all summer. At age 12, Bella got her first mobile phone—a $250 Panasonic clamshell in Barbie pink. Her parents' annual income reached $18,000, up 40 percent from when we first met.

As the material circumstances of Bella's family improved, the world became to them a more perilous place. Their cleaning lady stole from them and disappeared. Several friends were in near-fatal car accidents. One day Bella's father saw her holding a letter from a man she'd met online. Bella's parents changed the locks and the phone number of the apartment. Her father drove her to and from school now because he thought the neighborhood around it was unsafe.

Bella's mother took on more administrative responsibilities at work and enrolled in a weekend class to qualify to study for a master's degree. Bella's father talked about trading in their car for a newer model with better acceleration and more legroom. They frequently spoke of themselves as if they were mobile phones on the verge of obsolescence. "If you don't continue to upgrade and recharge," Bella's father said, "you'll be eliminated."

Social mobility ran in both directions. A friend of Bella's mother stopped attending class reunions because he was embarrassed to be a security guard. A company run by a family friend went bankrupt, and his daughter, who was Bella's age, started buying clothes at discount stalls. Society was splintering based on small differences. Family members only a decade younger than Bella's parents inhabited another world. One cousin ate out every night and left her baby in the care of her grandparents so she could focus on her career. Bella's father's younger sister, who was childless, thought nothing of buying a full-fare plane ticket to go somewhere for a weekend. Friends who were private entrepreneurs were having a second child and paying a fine; Bella's parents would probably be fired by their state-owned employers if they did that.

Bella tested into one of Shanghai's top middle schools, where teachers often keep students past five in the evening while their parents wait in cars outside. She is level three in English and level eight in piano. She still ranks in the middle of her class, but she no longer has faith in the world of adults.

She disdains class elections now. "It's a lot of work," she says, "and the teacher is always pointing to you as a role model. If you get in trouble and get demoted, it's a big embarrassment." She loves Hollywood films—especially *Star Wars* and disaster movies—and spends hours online with friends discussing Detective Conan, a character from Japanese comic books. She intends to marry a foreigner because they are richer and more reliable.

Her parents no longer help with her homework; in spoken English she has surpassed them. They lecture her to be less wasteful. "When she was little, she agreed with all my opinions. Now she sits there without saying anything, but I know she doesn't agree with me," her mother said one afternoon in the living room of their new apartment, as Bella glared without speaking. "Our child-raising has been a failure." In China, there is no concept of the rebellious teenager.

Across Chinese society, parents appear completely at sea when it comes to raising their children. Newspapers run advice columns, their often rudimentary counsel—"Don't Forcibly Plan Your Child's Life" is a typical headline—suggesting what many parents are up against. Some schools have set up parent schools where mothers, and the occasional father, can share frustrations and child-raising tips.

At times educators go to extremes: At the Zhongguancun No. 2 Primary School in Beijing, vice-principal Lu Suqin recently took two fifth-grade boys into her home. "Their parents couldn't get them to behave, so they asked me to take them," she explains. "After they learn disciplined living, I will send them back."

Life will not always feel like this. The next generation of parents, having grown up with choice and competition, may feel less driven to place all their hopes on their children.

BELLA HAD ONE FREE DAY during the 2006 weeklong National Day holiday. Some of her extended family—seven adults and two children—took a trip to Tongli, a town of imperial mansions an hour's drive from Shanghai. Bella's father hired a minibus and driver for the trip; a friend had just been in a car accident and broken all the bones on one side of his body. Bella sat alone reading a book.

Developing China zipped past the window, city sprawl giving way to a booming countryside of fish ponds and factories and the three-story houses of prosperous farmers. Bella's mother indulged in the quintessential urban dream of a house in the country. "You have your own little yard in front," she said. "I'd love to live in a place like that when we retire."

She was thinking seriously about Bella's future. If she tested into a good college, she should stay in China; otherwise she would go abroad, and they would sell the old apartment to pay

for it. She had decided that Bella could date in college. "If she finds someone suitable in the third or fourth year of college, that's fine. But not in the first or second year."

"And not in high school?" I asked.

"No. Study should be most important."

Tongli was mobbed with holiday visitors. Bella's family walked through its courtyards and gardens like sleepwalkers, admiring whatever the tour guides pointed out. They touched the trunk of the Health and Long Life Tree. They circled a stone mosaic said to bring career success. They could not stop walking for an instant because crowds pressed in from behind. It was the biggest tourist day of the year.

Bella politely translated for a great-aunt visiting from Australia who didn't speak Chinese, but it was just an act. "This is boring," she told me. "Once you've seen one old building, you've seen them all."

I sat with her on the ride home. She was deep into a Korean romance novel.

"It's about high school students," she said. "Three boys chasing a girl."

"Do people have boyfriends and girlfriends in high school?" I asked.

"Yes."

"What about middle school?"

"Yes. Some."

"Do you have a boyfriend?"

She wrinkled her nose. "There's a boy who likes me. But all the boys in my grade are very low-class."

She wanted to go to Australia for graduate school and to work there afterward. She could make more money there and bring her parents to live with her. "On the surface China looks luxurious, but underneath it is chaos," Bella said. "Everything is so corrupt."

Some observers of Chinese society look at children like Bella and see political change: Her generation of individualists, they predict, will one day demand a say in how they are governed. But the reality is complicated. Raised and educated within the system, they are just as likely to find ways to accommodate themselves to it, as they have done all along.

"Just because they're curious to see something doesn't mean they want it for themselves," says Zhang Kai, Bella's middle-school teacher. "Maybe they will try something—dye their hair, or pierce an ear—but in their bones, they are very traditional. In her heart Zhou Jiaying is very traditional," he says, and he uses Bella's Chinese name.

BELLA IS 15 NOW, in the ninth grade. She has good friends among her classmates, and she has learned how to get along with others. School is a complicated place. One classmate bullied another boy, and the victim's parents came to school to complain. Because they were politically influential, they forced the teacher to transfer the bully out of the class.

The incident divided Bella's class, and now her friends in the Tire Clique won't speak to her friends in the Pirate Clique. A friend got into school without taking the entrance exam because her mother's colleague had a cousin in the education bureau.

Bella's teacher nominated some students for membership in the Communist Youth League. Bella thought it meaningless, but she fell into line and pulled an application essay off the Internet. She couldn't afford to get on her teacher's bad side, she told me, citing a proverb: "A person who stands under someone else's roof must bow his head."

The high school entrance exam is a month away. In the evenings Bella's father watches television on mute so he won't disturb her studies. A good friend is also an enemy because they vie for the same class rank. Her compositions describe what the pressure feels like:

I sit in my middle-school classroom, and the teacher wants us to say good-bye to childhood. I feel at a loss. Happiness is like the twinkling stars suffusing the night sky of childhood. I want only more and more stars. I don't want to see the dawn.

Middle Class on the Move See photos of Wal-Mart China and check out the money-versus-love debate at **ngm.com.**



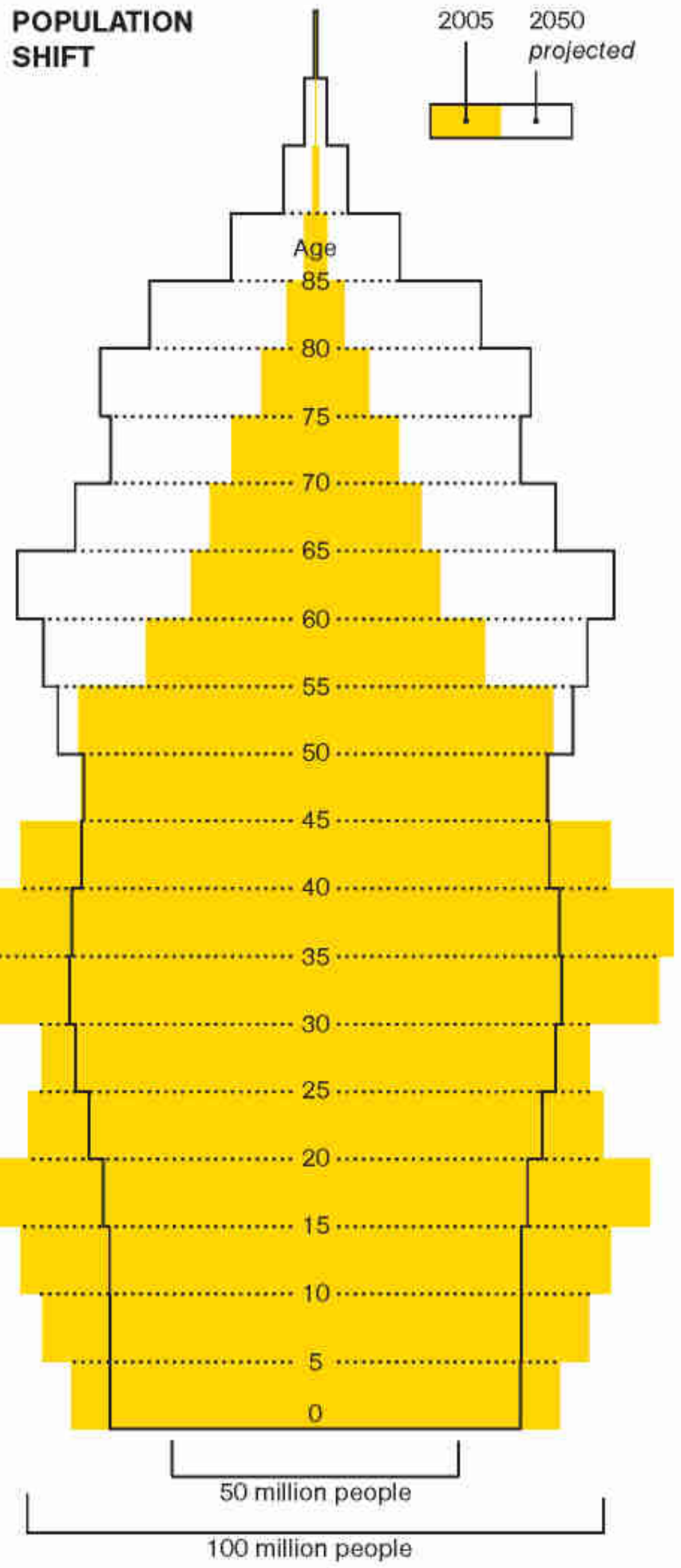
Susanne Shu, a TV documentary producer, returns from a wedding-dress fitting with Australian fiancé Campbell McLean. Several of her friends have married foreign men. “China is developing very fast, and a lot of people are coming here,” says Shu, 34, “so there are more opportunities for us.” □



SHRINKING WORKFORCE

It's the biggest demographic revolution in history: The number of China's elderly is ballooning thanks to improvements in medicine and sanitation, while the number of people born after the government's one-child policy went into effect in 1979 is dwindling. China's immense workforce, key to today's boom, will shrink after 2015. The country should be able to fill jobs by continuing to tap underemployed rural laborers. But by 2050 close to a third of China's citizens will be over 60—three times the current proportion. With little social security and few pensions to ease the burden, China's only children will have to support two parents (and in many cases four grandparents) apiece—a heavy load even for urban factory workers, who typically save a quarter of their wages.

—Karen E. Lange



CHARLES M. BLOW, NG STAFF
SOURCE: POPULATION DIVISION, UNITED NATIONS



Artist Li Wei photographed a baby rising from a hole in the earth as a way to depict new life in a changing world—one in which children without siblings will support both parents.

"THE BABY THAT LEAVES FROM THE EARTH" BY LI WEI (ABOVE)

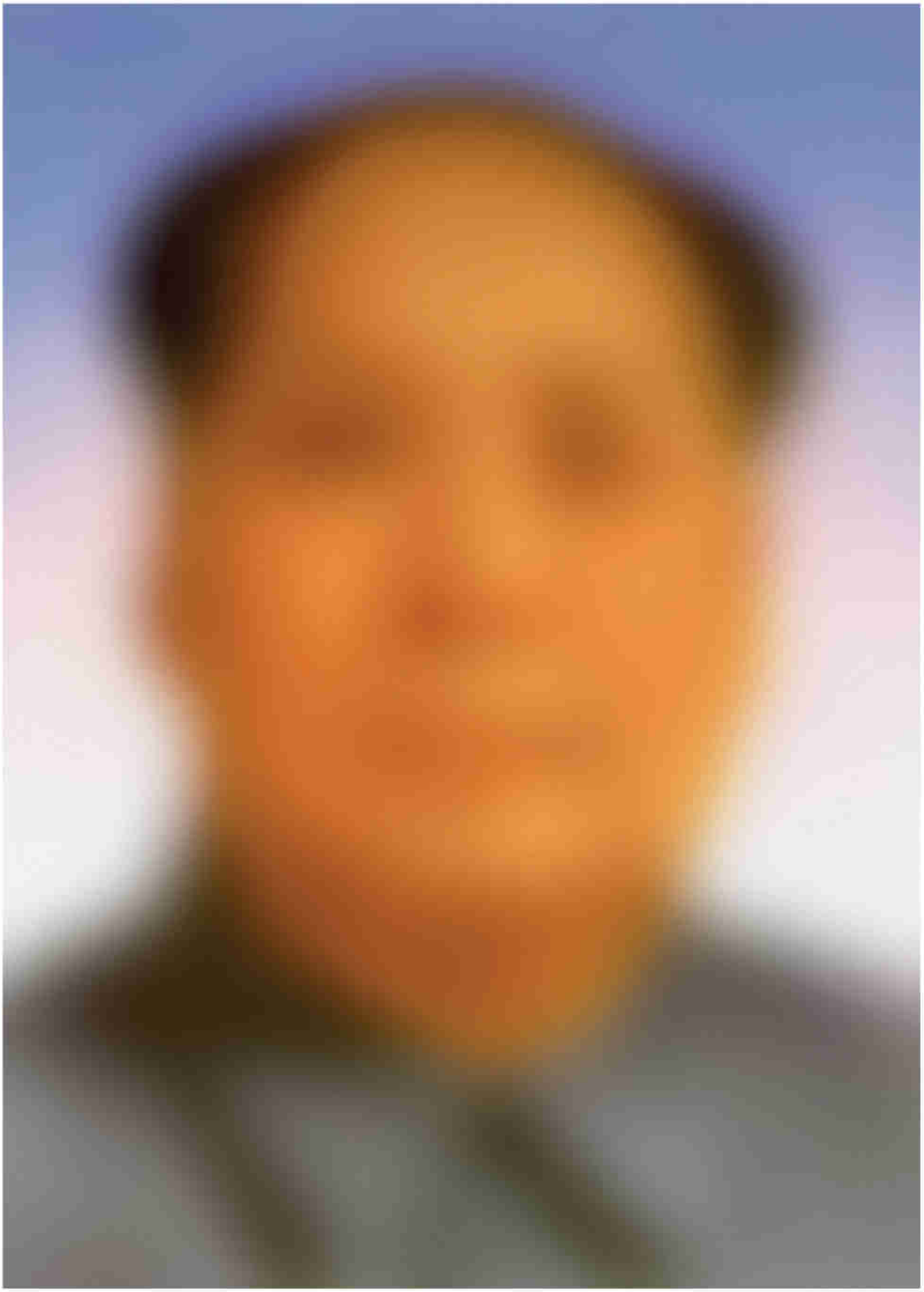
MAO NOW







Surely Mao must be spinning in his crystal coffin. The founder of the People's Republic of China, who decreed "there is no such thing as art for art's sake," has himself become an objet d'art. As attention shifts from making revolution to making money, and intellectuals debate Mao's legacy as hero or villain, artists cash in on politically charged, tongue-in-cheek (and flower-on-cheek) versions of the Buddha-like face. Some images are too charged: Gao Qiang's "Swimming Mao" was banned. "The government was unable to undergo the moral test," Gao says. Even before he became the darling of art galleries, Mao had been crowned the king of kitsch; his image decorates T-shirts and watches. The great leap forward from Red Guard to avant-garde probably began with Andy Warhol's 1972 silk screen portraits; one just sold for 17.4 million dollars to, fittingly, a Hong Kong tycoon. Call it the ultimate Chinese brand. —*Cathy Newman*



The many faces of Mao, from far left: Mao with a Stalinesque mustache; swimming in a blood-red Yangtze River; flower-cheeked; and out of focus.

FROM FAR LEFT: "HE IS A CHINESE STALIN" BY ZHANG HONGTU; "SWIMMING MAO" BY GAO QIANG; "MAO" BY LI SHAN; "MAO ZEDONG'S PORTRAIT 2005" BY HUANG YAN

VILLAGE ON THE EDGE OF TIME

For a thousand years the lives of the Dong people have resounded with song. Their distinctive culture endures—but for how long?

Five-year-old Wu Lianlian visits her family's hillside rice field with her hair ablaze in store-bought frills—a sign that the outside world has reached the once isolated farming community of Dimen.



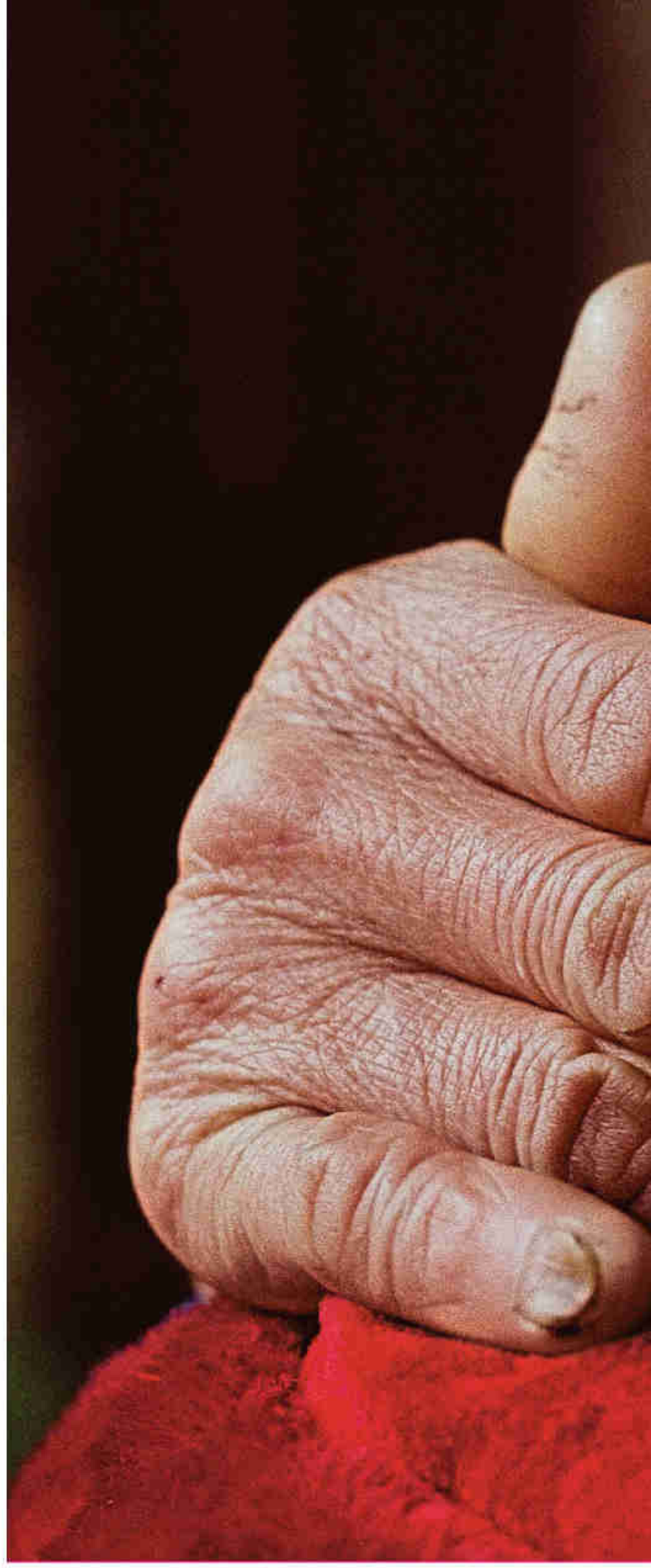
Amid the lush hills of southern China, students splash in the puddles outside their school after a downpour. When record-breaking storms flooded the village this past summer, the children happily paddled around on boards as if they were canoes.


地扪民族艺术团

A classic hat and a makeshift coat keep the rain off a *za*, or elder woman, as she chats with neighbors on the way to weed her rice field outside the village. Women must often hike several miles up steep paths to begin their daily farming chores.



BY AMY TAN
PHOTOGRAPHS BY LYNN JOHNSON



THE SUN WAS ALREADY LOW and the air still hot when I arrived at the tall ceremonial gate that led into the village. From the top of the dirt road, my eyes took in a valley in mid-harvest: a patchwork of pale green fields brushed with gold, broken by dark waves of upswept roofs. Against the mountainsides, rice fields were stacked like mossy pancakes.

Without warning, two ten-year-old girls ran up and locked elbows with mine, singing their welcome in staccato rhythm as they escorted me over a flagstone path through a maze of three-storied homes made of wood. Turbaned grannies watched from their porches. Three grizzled men wearing old-style Mao caps looked up from their pipes. A huddle of children followed. The girls led me past grain sheds, which stood on stilts over pens of fleshy pigs and ponds of ducks. Under a few sheds I saw what looked like three or four decorative cabinets lying on their sides. They were vessels to the underworld, made-to-order coffins, carved from trees that had been selected when their future owners were born.

I had arrived in Dimen, home to five clans and 528 households of the Dong minority, an enclave nestled in the luxuriant mountains of Guizhou. The province is poor and remote. Proof of the latter was hammered into my spine during an eight-hour bus ride over a winding road, some of it washed out by mud slides. A severe drought two years before had been followed by flash floods. This year the long harvest days were oppressively hot. One of my new Dong friends quoted a Guizhou saying: "Not three feet of flat land, not three days without rain, not a family with three silver coins." I imagined that was often muttered by Mao's followers when the Long March in 1935 took them up into the wild slopes and damp creases of Guizhou.

I had been lured to Dimen by the music. The Dong people have no written form of their

Amy Tan often travels to China to visit family; Dimen will feature in her next novel. Lynn Johnson's favorite assignments involve chronicling ordinary lives.



Toughened by a lifetime of fieldwork, the hands of a za provide loving care for her grandson, who wears a traditional hat adorned in silver. Many young adults now live elsewhere for their jobs, leaving their children in Dimen to be raised by grandparents.

language, Kam. Songs are the record of traditions and a mythic history that is a thousand years old, or so the songs themselves suggest. I had heard that you could ask anyone in a Dong village for a song, and he or she would sing without hesitation. I would hear many: a welcome song about keeping out invaders, melodies about growing old, Dong favorites about feckless lovers. And, as reprised by an old woman, the Communist Party hit from the fifties, "The East Is Red."

At the far edge of the village we reached a covered bridge that was fanciful, outlandishly so for a small village of rice farmers whose income is less than a hundred dollars a year. The bridge was as formidable as a dragon, with a scaly roof for its body and cupolas for its head and spine. I viewed it with the awe of a child who has just seen a fairy-tale place jump out of a book.

The bridge was actually one of five connecting the five clan villages that make up the unified village of Dimen. For their beauty they are called

I had heard that you could ask anyone in a Dong village for a song, and he or she would sing without hesitation. I would hear many.

flower bridges, and for their practicality, wind-rain bridges, a handy shelter from the elements. Benches run along both sides of the bridges, making them an ideal resting spot for old comrades, a playground for children, and a work space for carpenters when dark clouds churn.

Over the course of three visits to Dimen, two in the autumn, one in the spring, I crossed those bridges many times and saw the colors and hues of daily life: farmers on the way to their fields, children en route to school, old women coming down the mountain with sacks of kindling on their backs. At the main Drum Tower, an airy, five-storied pavilion, the 11 Village Elders preside when there is good news to announce or grievances to air. In the big courtyard rice is laid out to dry in autumn, pigs are slaughtered for feasts, and men play cards on warm nights. Roads with hard ruts turn quickly to soft mud in rain.

One afternoon a family pushing a heavy cart over that same road nearly dumped its costly load of bottled beer. Five hundred guests, some from distant provinces, were coming to Da San Zhao, a baby party that cost more than a wedding, this one for a girl only 20 days old. "You come too," they said. People often called out from their doorways: Come to dinner. Come to breakfast. How about lunch? I crossed the flower bridges for many meals. And sometimes I would pause in the middle to face the river straight ahead and look at the mountain that is its source. I always saw people working in the terraced fields, harvesting, planting, plowing, or tending to vegetables grown in the off-season.

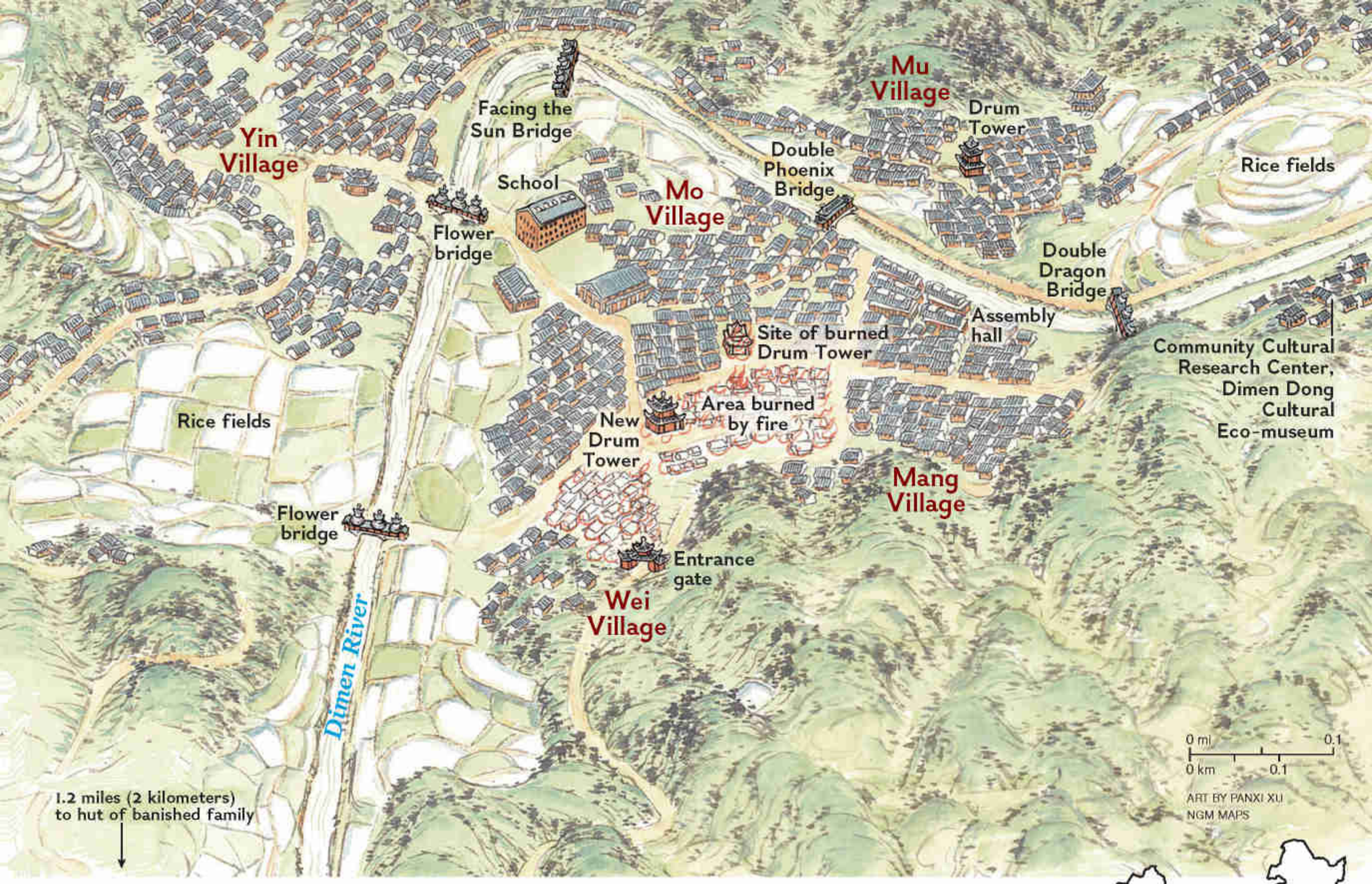
The farmers had begun the harvest by draining the rice fields, punching holes into the earthen walls that separated them. Water gushed out, and soon hundreds of fish the size of a man's hand lay flopping on the muddy bottom. Earlier, in the spring, the farmers had put carp fingerlings into the fields with the planting. The fish grew with the rice, grooming their watery home of weeds, algae, little snails, as well as mosquito larvae. Fallen logs were stained yellow with carp eggs. In the summer the carp fattened up on lovesick moths that had attempted conjugal bliss with their reflections and drowned.

One evening after a sudden storm had knocked out the electricity, I sat on a foot-high stool in a woman's kitchen, trying to be useful by holding a tiny flashlight as she preserved hundreds of pounds of fish. She stuffed the fish with a paste of five flavors, including *huajiao,* the fiery berry of the prickly ash that gives much of the food in Guizhou its *mala,* tongue-numbing notoriety. With mala searing your brain, you forget that the weather is hot. For hours she was bent over her task. The next day she was bent over in her field. I asked if her back ever hurt. "It never stops hurting," she said, "because the work never stops."

By the New Year the ripened carp would be deemed *anyu,* the raw fermented fish that adds zest to any meal and is part of every ceremony: for births, weddings, and funerals, for raising the center beam of a new house, for celebrating the steadfast cows. The power of anyu cannot be overestimated. I ran along a cobblestone path one moonless night, following a Feng Shui Master to a pig shed. There he made an offering of sticky rice, chicken, egg, wine, and anyu. He recited an incantation directed to a *ganjin,* a gremlin with backward feet who lives in the mountain. The ganjin had entered the body of a boy that afternoon and wracked his body with fever and pain. Three minutes after the ceremony the boy's mother came running with the news: "He's already eating!"

The Feng Shui Master had learned the incantations from his uncle, an herbalist, who is also the Chief Feng Shui Master, the most experienced, the one who has a constant stream of patients in his kitchen. In the span of an hour, the herbalist saw ten patients, most of them elderly women dressed in traditional clothes, frayed workaday jackets, and head wraps made of cloth they had woven and dyed themselves.

One woman reported that her grandson had developed sudden pains in the head and stomach. The herbalist burned paper and floated ash



FIVE DONG CLAN VILLAGES—Mang, Mo, Mu, Wei, and Yin—have grown together to form Dimen, a community of over a thousand, in Guizhou Province. The villagers are still recovering from a fire in 2006 that destroyed or damaged about a hundred homes.

in water with rice grains. He said an incantation, counted out on his fingers the names of gods who might have the answers—God of Kitchen, God of Bridges, God of Injury. The diagnosis came back: The boy had seen the ghost of his great-grandmother. As remedy the woman should make the great-grandmother a feast of rice wine and anyu, then invite her to eat well before her journey back to the World of Yin, the underworld.

Another patient woke up with a stabbing pain in her throat. The herbalist told her she was inhabited by the ghost of a man who had been hanged. A woman whose body hurt all over was inhabited by an ancestor who was unhappy that he never had a tombstone these past 200 years. The herbalist soothed his frightened patients. "Prepare the anyu and wine. I'll come tonight, and the ghost will be gone." For a baby with diarrhea caused by drinking unboiled water, he headed to a hillock, where he plucked various leaves and long grasses to make a potion.

He charged nothing for his healing services. But his grateful patients gave small gifts, an egg, some rice. He argued with one woman who tried to give him two kwai, about 20 cents, for a rice fortune that would tell her future. "It's too much," he said, and pushed the money back.

Suddenly a young man ran in. His mother had grown worse, and the pigs had also stopped eating. As the Chief Feng Shui Master walked calmly to the patient's home, I ran, struggling to keep up. It was as if he was flying without effort, and I was crawling on stiff knees.

"It's superstition," said a Singing Teacher in his 30s. "It's just the old people who believe in ghosts."

THE OLD PEOPLE still exert considerable influence in the Dimen world. The *za*, or elder women, strap their infant grandchildren to their backs and care for them all day, until the parents return from work. If the parents work in other

Known as a flower bridge for its pleasing design, a typical span offers shelter from the wind and rain, and seats for contemplating the scenery. Five such structures with unique details—this one named Facing the Sun—convey villagers across Dimen's river.



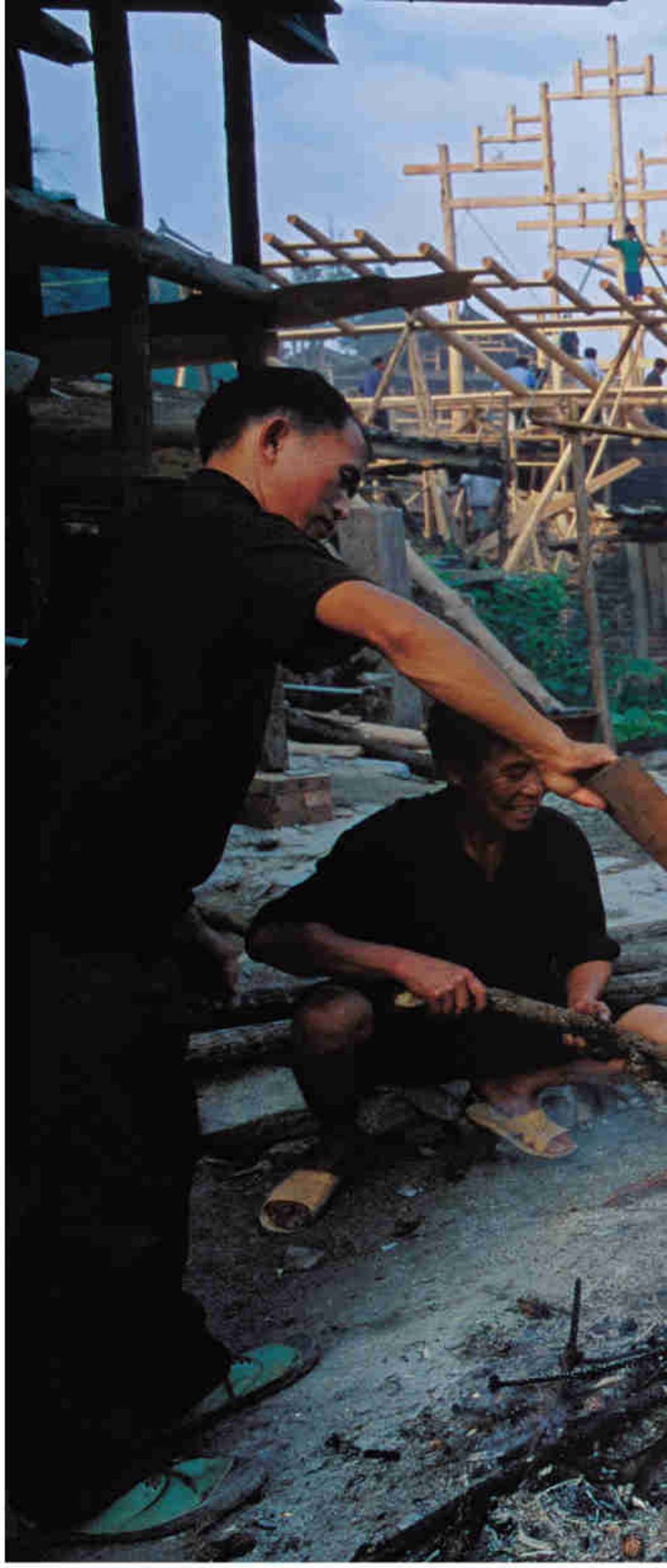
cities, the za raise them from birth and immerse them in Dong ways. They sing songs to them about table manners and field chores, about the moral good of selflessness, and the moral evil of greed. They wash their hair in sour soup. They take them to the clinic, where they are put on IV antibiotic drips for whatever ails them, be it stomachache or runny nose. And if that doesn't cure them, the za go to the Feng Shui Master to learn if they are inhabited by ghosts.

Eleven Village Elders, men over the age of 60, apply reason and reasonability in overseeing social welfare and civil order according to the Dong code of conduct. The oldest of the elders has seen radical changes over the years: from when the communists first came to Guizhou through the period of the Cultural Revolution when the educated youth came to be reeducated as farmers. Seven years ago the first television with a choice of 20 channels made its debut. In other villages satellite dishes sprouted on rooftops like spores after rain. The Village Elders in Dimen found a more sophisticated solution: one large dish shared by a network.

The changes seem to come faster each month. In 2006 mobile phones began working in remote areas, and by early 2007 nearly everyone had them. Now you could be plowing your field in the mountains, miles from the village, and receive a call from your wife asking you to pick some wild greens for dinner on your way home. Young men working in other provinces send text messages to their hometown sweethearts. Out of Dimen's official population of 2,372, about 1,200 work and live elsewhere. There are some success stories; many can earn more than $200 a month. Those who wind up in factories might earn less than half that, still far more than they could earn at home. But they miss the life of Dimen that is sung in songs, the crying cicadas, the fruits of spring, the quiet beauty of the mountains.

In Dimen people sing nearly every day. In classrooms students sit with perfect posture at their desks. They repeat in perfect a cappella pitch what their teacher has just sung. On weekends a troupe of older girls dressed in jeans and pink tops stand before the Singing Teacher and practice fast-paced songs, each taking a solo. Two gravelly voiced elderly women, respectfully called za by all, guide the younger children in reciting simpler chorals.

One of the za has blue-tinged eyes. At first I thought this was a genetic remnant of outsiders who had come through the region—perhaps foreign traders diverted from the Silk Road. Dimen has had many invaders, the blue-eyed za told me. "In 1920 a Chinese warlord kidnapped my mother's 16-year-old aunt to make her his ninth concubine. No one heard from her again." In those days, the blue-eyed za said, people who came stole our things and killed people. Each





While carpenters rebuild a house lost in the catastrophic fire, the owners roast a pig for lunch. The county government subsidized traditional wood construction, though most villagers would rather have used brick.

time, she and her family put sticky rice in their baskets and ran into the mountains to hide.

When the za asked me for eyedrops, complaining that her eyes were cloudy, I realized the blue in her eyes was cataracts. Several people had already told me she was the only one who knew all 120 verses of the epic song of Dimen's history, hours of a bluesy repetitive melody. According to this anthem, the original Dong ancestors of Dimen began as a people who wore no clothes. Invaders had driven their descendants to Dimen. "That old song is boring," two teenage girls later told me. "We're too busy to learn something we don't like."

The blue-eyed za was 74, but she could lift twice as much kindling as I. She could scamper over uneven rock. She could stride up the mountain, leaving me breathless behind. But what would happen to the epic song after she was gone? What is an unwritten Dong song if there is no one left to remember it? How many other traditions of Dong life would soon be lost?

Some losses happen overnight.

IN THE EARLY HOURS of a cold April morning, a bedridden old man dropped his quilt onto the copper basin of burning charcoal that kept him warm. People heard his screams: "It hurts!" The





A divination ritual revived after almost three decades aims to restore harmony in Dimen after the fire and other unfortunate events. Amid sprays of water the blindfolded men, in a trance, ride ghost horses to search for the cause.



Wu Lianlian shares a laugh with her mother beside her coffin tree, chosen for her at birth. If she follows tradition, she will have the tree cut down and carved to order when she reaches old age. In a sign of the times, one carpentry shop now sells ready-made coffins (right).

wind was strong that night, and the fire moved in whatever direction the wind pushed it. People fled their homes "without even a pair of shoes," and from the wind-rain bridges they watched their homes burn. The fire brigade from the township below was summoned by a mobile phone call. But when the firefighters attached their hose to a spigot next to the Drum Tower, no water ran out of the broken pipe. The Drum Tower itself was a bonfire.

By sunrise the Drum Tower and 60 homes were smoldering heaps. Forty-four other homes bore scars, from blackened sides to missing boards, or had been torn down to create a firebreak, which ultimately saved the rest of the village. The old man was the only one who died. Only part of his torso remained, his neighbor reported. For days the air smelled of charred wood, burned grain, and roasted pigs.

"I was going to give my silver to my granddaughter," one za told me, as she sat across the road from the ruins of her former home. "But it's all gone." She threw her arms up in the air, as if the fire were rising before us with a whoosh. "I cried for four days, without stopping, without eating. When government officials arrived, they came to me first, because I was bawling the loudest. I cried to them, I am the widow of a party secretary, and only my coffin wasn't burned."

The farmers tallied their losses: homes, pigs, farm tools, grain sheds, and the woven clothes and silver heirlooms of grandmothers and mothers. It would cost them each 20,000 to 40,000 yuan ($2,500 to $5,000) to repair or rebuild, a lifetime of debt. The sons of the fire starter were blamed for leaving their father alone while they were outside drinking with relatives from out of town. "When guests come, you have to offer them wine," said a carpenter in a village four miles downriver. "It was an accident."

This accident had its causes. One bad thing leads to another. The family of the fire starter had been troubled for a long time. People used to hear the Eldest Son and father argue at least four times a week. It ended each time with the son beating up the father. A crowd witnessed

The son never cut down his father's coffin tree to have it made into a coffin. No wonder the old man's ghost was wandering.



such a beating in front of the Drum Tower during Spring Festival. "For a son to do such a thing to a father," said the Singing Teacher, "that is very wrong." The family's volatile temper was a curse on the village.

Big fires, however, are not unheard of in Dong villages. On average a village suffers one every 30 years. And the most frequent cause? A sleepy old man whose quilt falls into a basin of fire. It was exactly what had devastated two Dong villages in the prior two years. And one year after Dimen's fire, a slipped quilt left a poor village downriver much more impoverished.

The Village Elders took into account the suffering of the victims and the morals of those responsible. They assessed a penalty based on the Dong code of conduct: The sons were to be banished for three or four years. They had to live across the river no closer than three li, about a mile, from town. In addition they had to pay 10,000 yuan for a ceremony to the God of Land, as well as provide a chicken dinner for the entire village. By then the two younger sons had run off, and so the eldest had to suffer all the consequences. He and his family went to live in a cowshed on one of his higher fields.

The code allowed the Village Elders to assess a longer banishment and to a farther distance. But they had been lenient because of the Eldest Son's younger children. The boy and girl attended primary school in the village. The distance was not as forbidding as the condition of the pathway in bad weather. The final hundred yards to the cowshed was over a hip-wide footpath, actually the top of a semicircular wall between rice fields. One slip, and you would fall three feet in one direction or twenty in the other. In a strange way the home of the banished man had one of the most beautiful vistas I had ever seen. It was a panorama of mountain, field, and sky, and nothing else. "Nothing else" was their punishment. Before this happened, the banished man said, he had always gotten along with his father. Now he hated him. They had lost everything they owned and were in



On a trip home to celebrate the new year, television star Wu Qinglan screens a recent performance for her grandmother. The shows she saw as a child on her family's TV, the first in town, inspired her to "fly out of the big mountain"—leave Dimen—to find fame.



After a summer day's swim, a boy returns to his new bike. Modern amusements get increasing attention in the village, but cherished customs persist. On Saturday mornings, learning old songs from the za in the cultural eco-museum (right) takes priority.

debt. Their 15-year-old son could not deal with the shame of exile and had fled to Guangzhou, where he worked in a factory making clothes hangers. Their reputation would be stained for generations to come. But they would not leave Dimen. They would live in the cowshed until they could return and build another house.

DOWN IN THE VILLAGE, neighbors, family, friends, and even people from other villages hauled lumber, set beams in posts, and planks across beams, to build a traditional Dong home three stories high, with a roof of mud-clay tiles, all without nails. One house was only a skeletal frame, but an old woman, the Widow of the Party Secretary, had laid two planks across two beams, and that was where she slept, under open skies and ten feet above the ground level. By winter all families would be in their new homes.

The ghost of the old man, however, was not happy, according to the neighbors. After the fire, the Eldest Son stuffed his father's torso into an old rice bag. Several people saw him carrying the sack into the mountains, and when he returned, he was empty-handed. The son never cut down his father's coffin tree to have it made into a coffin. He chopped it down for lumber he could sell. No wonder the old man's ghost was wandering: The closest neighbor heard his footsteps behind her four times, and when she spun around, nothing was there. Even the wife of the Singing Teacher, who lived near the Drum Tower, said she had heard the old man cry out several times. But not every old person believed there were ghosts. The Widow of the Party Secretary said Chairman Mao got rid of them in 1957. She then showed me a charm bracelet of old coins. "The more coins," she said, "the more you can avoid unclean ghosts."

But the five Feng Shui Masters and their chief believed the village was suffering from malevolent forces. While the old man and his sons were responsible for causing the fire, other factors must have had an influence. Of all nights, for example, why was the water pipe near the Drum

The za sing songs about table manners and field chores, about the moral good of selflessness, and the moral evil of greed.



Tower broken? Why did a pig fall off a cliff, and a chicken and duck die for no reason? Why were the roosters crowing before midnight? There had also been an unusual amount of illness, and it struck everyone, old and young. A baby died. And over the past two years, ten young people, between the ages of 20 and 40, had been killed. One man perished in a typhoon. Another was a newly married young man. He bought a motorcycle and went to a store to buy a helmet, but they were out of stock. The next day he flew headfirst into a post in the road. His bride received a mobile phone call, telling her the news.

A similar string of unusual coincidences had occurred in 1979. Many came down with an eye disease. Livestock died. People noticed that their chickens wandered over to a certain household. That family's chickens hatched double-yolked eggs. Their crops had better yields. What had they done to create so much luck, while others had more troubles? Through divination rituals, the Feng Shui Masters learned that the family had secretly buried their ancestors in areas of the village with the best feng shui and had thus cut the village off from this source. After the Feng Shui Masters removed the illegal burials, 11 members of the guilty family died.

DURING SPRING FESTIVAL, and for the first time since 1979, the village would be cleansed again by the same ceremony, Guo Yin—"Pass into the World of Yin." In the dim light of an assembly hall, 11 blindfolded men sat on black benches. The Chief Feng Shui Master called out incantations from the Book of Shadows. As fragrant rattan burned under the benches, assistants gave the men a rope of twisted straw to hold at both ends. More incantations were murmured, two bells rang, bowls of wine were stirred, and the 11 men slapped their bouncing knees, as if goading a horse to move forward. Soon they were galloping in a frenzy, and the oldest of them, a 73-year-old man, whinnied like a spooked horse, shot up, and leaped backward onto the bench. He had mounted a ghost horse and was racing toward the World of Yin.

Bending to the constant rhythm of farming, a woman gathers rice shoots from a plot near home to sow in terraced fields. Come what may, fire or flood, this is the work that still feeds her family and stands at the heart of her ancient culture.

Assistants kept the frenzied rider from falling. Soon more riders mounted their ghost horses. The Chief Feng Shui Master sprayed water from his mouth to light the way. With more incantations the ghost-horse riders could go to deeper levels. At each level they could see more.

In 1979 the riders had gone to the 19th level, where they saw their dead mothers and fathers. Stay with us, their parents urged. If a Feng Shui Master provided the wrong incantation, the riders would not return. This time, the master would take them no further than the 13th level. It was still possible for them to find the illegal burials. At that level they could also see the backs of maidens, the Seven Sisters, as beautiful as fairies. Chase them, the Chief Feng Shui Master said, to urge them to go farther into the underworld.

That day the riders discovered where the illegal burial lay. After the ceremony they left the hall and walked to a slope that was shaped like the back of a comfortable sofa. At the top of the sofa was a small rice field, and buried several feet into its wall was a large ball with a thick crust. Unlike the Eldest Son of the fire starter, someone had placed the happiness of ancestors above that of the village. It must have been the doings of a greedy family from another village. The Chief Feng Shui Master broke the ball open,



removed the ashes, and mixed them with rice wine, pig and human feces, and tung oil. The mess was thrown into the public latrine, and those ancestors who had once occupied the best place were now stuck forever in the worst.

HARMONY BETWEEN THE WORLD above and world below had been restored. Or had it? In late June, four months after the Guo Yin ceremony, sudden heavy rain began to pour late at night. A small amount of flooding was not unusual in summer. The previous year a two-hour storm had transformed footpaths into ankle-deep streams and the schoolyard into a pool, where children gleefully splashed.

But this rain did not stop. People could hear it spattering on their roofs all night long. The Chief Village Elder, who lived in the flat valley, saw the river rising but was not concerned at first. He went into the mountains at 5 a.m. to feed his horse. When he returned, the river had spilled over its ten-foot-high banks. His family was gone; they had already carried the television and other valuables up the steep ladder-stairs to the top floor. His neighbors were in the midst of securing coffins and scared pigs. He watched from the closest bridge.

On the other side of the bridge, water rushed into the ground level of homes. A frightened young woman strapped her baby to her back, and she and her in-laws took what they could to the upper level. Other belongings floated away: buckets and stools, the pails for anyu and bamboo holsters for scythes. Her neighbor's front door ripped off and became a raft. The narrow road was now part of the river, a dark channel of mud, rocks, debris, and logs. Waves slapped the sides of the shortest bridge, and water gushed through the rail slats and covered the benches. It looked like a boat about to break from its moorings. Submerged fields broadened the river, and hundreds of carp rushed downstream. Some landed in fields. People stood on bridges trying to net the rest.

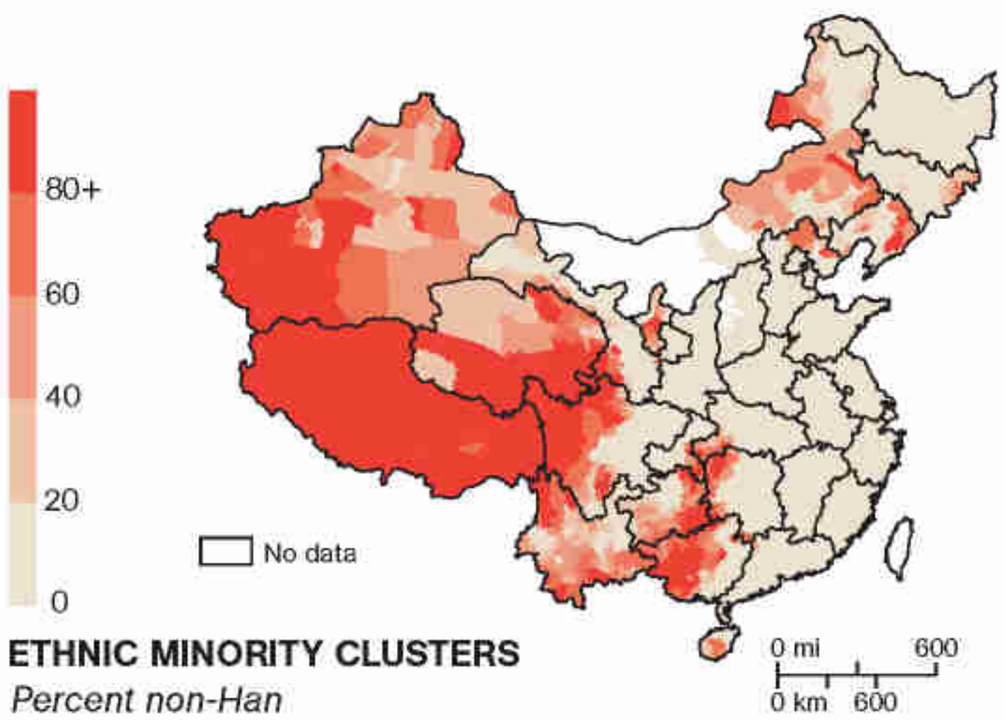
At 9 a.m. the rain subsided. At 11 a.m. the water began to recede. The wife of the Chief Village Elder caught up with him. "Where were you?" she demanded to know. According to the chief it was the worst flood in 80 to 100 years. Fields were lost, homes were damaged, roads were washed out, but luckily no one was killed.

Was the curse still active? Were there more illegal burials to be found? The Chief Feng Shui Master was not perturbed. All of Guizhou and Hunan Provinces had been affected. This was a natural disaster, he said, not a supernatural one. It was simply bad weather, and they could handle that. They just had to clean up the mess. □

Vintage Village In a narrated slide show, Lynn Johnson shows how traditional, rural Dimen is inching into the 21st century at **ngm.com.**

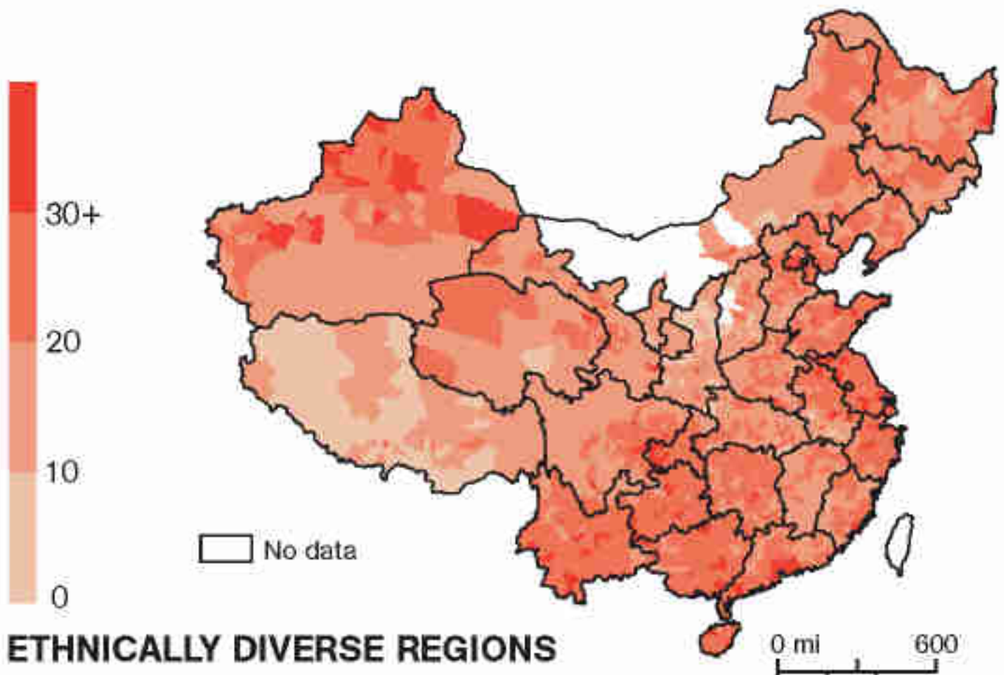
BEYOND THE HAN

Given that around 91 percent of its people are ethnic Han, China might seem a homogeneous country. Yet in a population of 1.3 billion, even China's minorities are sizable—and growing. Its 55 non-Han ethnic groups, largely exempt from China's one-child policy, add up to more than a hundred million citizens, on par with the population of Mexico.



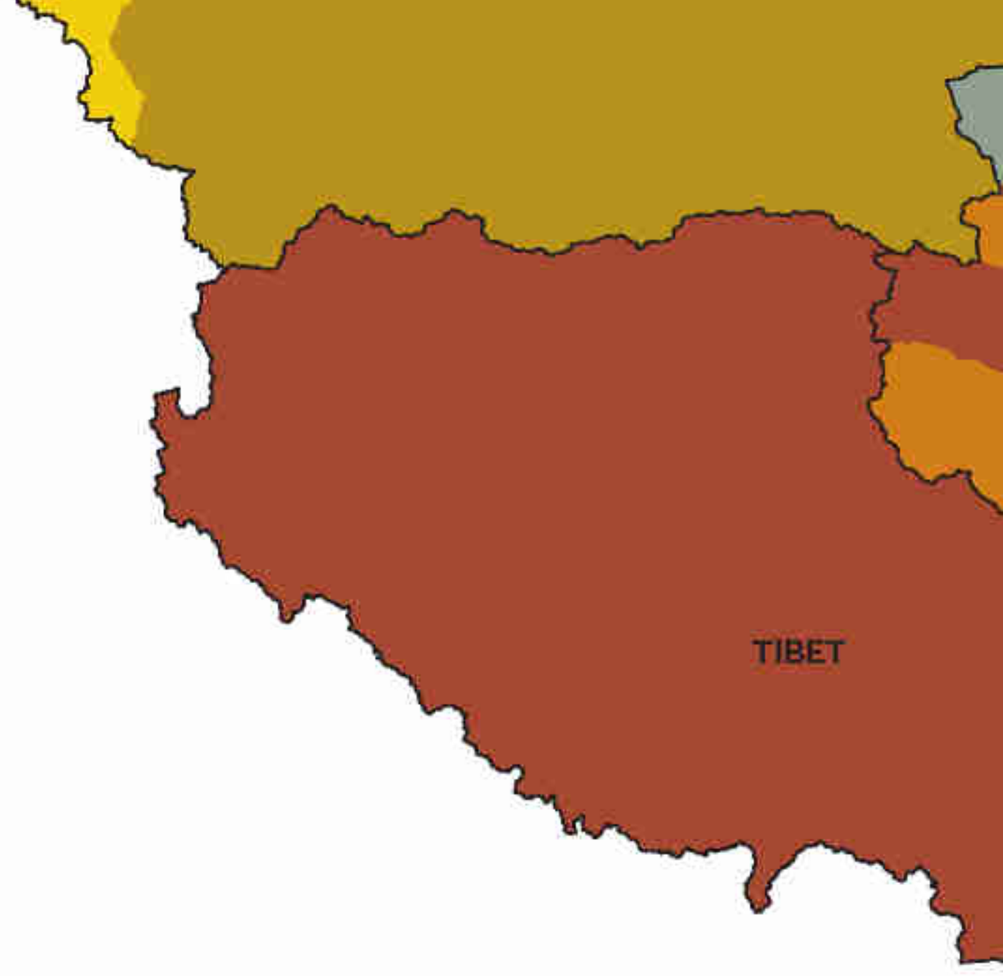
ETHNIC MINORITY CLUSTERS
Percent non-Han

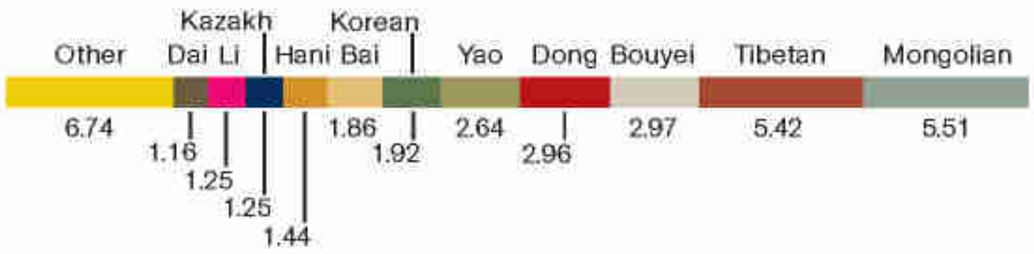
In some areas of western and northern China, ethnic minorities are the majority. Their faster growth is helping fill sparsely populated areas.

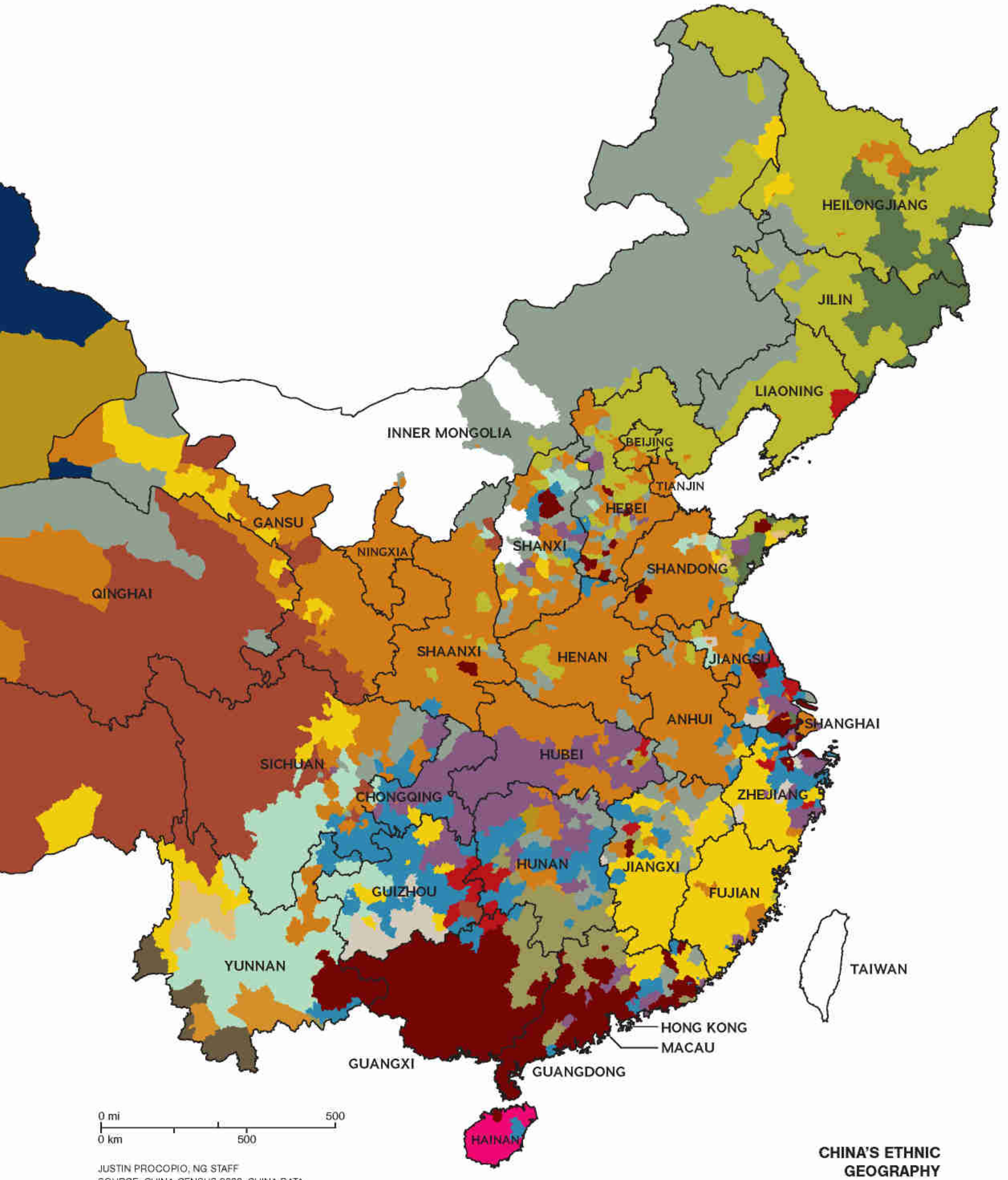


ETHNICALLY DIVERSE REGIONS
Number of minority groups

In some provinces, China's population is a mix of different ethnic groups, though the Han still predominate.







JUSTIN PROCOPIO, NG STAFF
SOURCE: CHINA CENSUS 2000, CHINA DATA CENTER, UNIVERSITY OF MICHIGAN

CHINA'S ETHNIC GEOGRAPHY

Largest ethnic minority group by county, 2000

No data

Yi	Tujia	Uygur	Miao	Hui	Manchu	Zhuang
7.76	8.03	8.40	8.94	9.78	10.67	16.18

Above numbers in millions

Total minority population as of 2000: 104,874,264

CUTTING OFF DISSENT

Something vital is missing in China. Yet its absence is still felt, raising a question that lingers like a phantom limb: Can the ruling Communist Party continue to suppress political dissent among one-fifth of the world's population? While China has embraced economic development, it remains a repressive one-party state. Monitoring newspapers, magazines, artwork, and more, government functionaries regularly detain citizens whose ideas might undermine China's constitutionally enshrined values of "security, honor, and interests of the motherland." The party's Publicity Department (formerly the Propaganda Department) sends daily directives to journalists on how to cover the "news." And while the Internet is a conduit for information, it also serves as a surveillance tool for the party, which slaps dissidents with demotion, dismissal, or imprisonment. Last year 29 members of the press spent China's National Journalists' Day behind bars. Foreign reporters feel the pinch too. Says one: "The aim is intimidation and fear, and it works." In a recent assessment of press freedom by Reporters Without Borders, China ranked 163 out of 169 nations. Some pundits say censorship will inevitably disappear as countries "engage" China, but others say that's far too optimistic. As James Mann, author of *The China Fantasy: Why Capitalism Will Not Bring Democracy to China*, observes, "As other authoritarian leaders around the world seek to stifle political opposition, they look to China as a model." *—Alan Mairson*



To protest the events of Tiananmen Square in 1989, artist Sheng Qi cut off his finger. He created a series of photographs of his hand, in this one holding a boyhood photo.

"MY LEFT HAND–ME" BY SHENG QI (ABOVE)



National Center for the Performing Arts

Architect: Paul Andreu, France
Completed 2007

Rising amid an aging *hutong* neighborhood, the vast titanium dome of Beijing's new arts center sits near the Great Hall of the People (at right) and Tiananmen Square. Known as the egg, it serves as "a symbol of rebirth," says architect Paul Andreu.

PANORAMA BY STEPHEN WILKES, COMPOSED OF TWO IMAGES
ART BY FERNANDO G. BAPTISTA, NG STAFF



THE NEW GREAT WALLS

With the Olympics looming, China is pushing architecture to its limits for a giant coming-out party.





National Stadium

Architect: Herzog & de Meuron, Switzerland

Completed 2008

A lacy tangle of steel twigs cradles Beijing's 91,000-seat Olympic stadium, nicknamed the bird's nest by locals. "We didn't design it to be Chinese," says noted Beijing artist Ai Weiwei, a consultant on the project. "It's an object for the world."

BY TED C. FISHMAN
PHOTOGRAPHS BY GREG GIRARD

Lunch for the workers constructing the China World Trade Center Tower in Beijing begins at 11:45. Thousands of hard-hatted men pour out of the site of the 74-story high-rise that will be the city's tallest. Most dig into their lunches on the sidewalk. Others head for a food stand where a tin bowl of sheep-gut soup costs 14 cents. Mr. Wang, who comes from a rural village in Henan Province, runs a crew installing ventilation shafts in the first 30 floors of the trade tower. His helmet, too narrow for his formidable head, sits high and rocks when he talks, more so when he laughs. Wang, at 51, has a burly body and a confident eye, but several of his charges are teenagers fresh off the farm. As boss, he bears responsibility for their mistakes, so sometimes he speeds their training with his boot.

Wang and his crew are part of an army of largely unskilled workers, more than a million strong, that has helped turn Beijing into what is perhaps the largest construction zone in history, with thousands of new projects under way. Once a flat cityscape dominated by the imperial Forbidden City and monumental but drab public buildings, Beijing has been struck by skyscraper fever. Over the past 30 years, China's economy has averaged nearly 10 percent annual GDP growth, driven by the marriage of world-class technology with a vast low-cost workforce. That same dynamic has turned China into an architects' playground, first in Shanghai in the 1990s as its skyline filled in with high-rise marvels, and now in Beijing, which is building at a mad pace in preparation for the 2008 Summer Olympic Games in August.

Beijing's newest buildings push aesthetic and technological bounds, each outshimmering the last. Most major projects have been designed by foreign architects: Chinese clients crave innovation and hunt beyond China to get it, says American architect Brad Perkins, founder of Perkins Eastman in New York. During Mao's Cultural Revolution, architects were more technicians than artists (even the term architect was considered bourgeois), and private architectural firms were a rarity until a decade ago. "By turning to foreigners like me," says Perkins, "the Chinese are buying 30 to 40 years of experience they didn't have."

China's low-wage workers in turn allow foreign architects to design structures that would be too costly to build at home, with decorative tops, intricate latticework, and bold engineering. The linear grace of the China World Trade Center Tower, for instance, comes from an innovative cross-bracing system that gives it strength against the city's seismic rumblings and high winds, and from glass louvers engineered to make the most of the city's sunlight. But the tower's architects, Skidmore, Owings & Merrill, also used technology that could be handled by crews working at breakneck speed. The building's prefabricated window walls can be snapped together rather than cut on-site, as they would be with more highly trained workers. Using huge construction crews that work around the clock, foreign architects get to see big projects to completion in China in a remarkably short time, often within three to four years. "Some people in China—including Chinese architects—believe their country has become the Western architects' weapons testing ground," says Perkins.

For centuries China's leaders have reshaped the capital to showcase their power and reflect their preoccupations. The Forbidden City was constructed during the 15th century to project the Ming dynastic rulers' connection to heaven. A throng of Soviet-style halls, stadiums, and vast boulevards sprang up in the 1950s and '60s following the Communist Party's rise to signify the

Ted C. Fishman is the author of China, Inc. *Greg Girard's most recent book is* Phantom Shanghai.



High-rise trumps history in Beijing, where traditional courtyard homes await demolition. More than a million people have been forcibly displaced by new construction.

collective strength of workers and the absolute control of Mao's rule. Today Beijing, the national emblem, is being remade as China's global city. When new buildings open, officials like to speak of how the structures embody the country's "soft power." Outsiders, goes the message, need not fear China as an aggressor nation or military power.

This message is clearest in the 40-billion-dollar building spree occasioned by the Olympics, the nation's coming-out party. The buildings say that China is big and powerful, but also inventive, sophisticated, and open. Look at three of the most prominent new structures: One is a stadium that looks like a bird's nest, another an aquatic center that resembles a blue bubbly cube, a third an arts center in the form of an egg as big as a city block. Nests, eggs, and bubbles—a whimsical, approachable China. And then there's the "twisted doughnut," the stunning giant home to CCTV, China's government-run broadcaster. Still unfinished, the building connects at the top with cantilevered sections that meet 531 feet high in the air. Practical-minded Beijingers crane their necks and wonder aloud whether the skewed tower will tumble.

A complaint often heard: Many of these structures are designed for foreign tastes, not Chinese. "China is not confident of its own designs, and people prefer to try something new," observes Du Xiaodong, editor of *Chinese Heritage* magazine in Beijing. "The results are disconnected from whatever's next door, and the newest building in the world sits next to some of the oldest, standing together like strangers."

One of the public shames of Beijing is that its building boom has destroyed most of the city's old *hutong* neighborhoods of traditional courtyard houses, whose residents are often forcibly relocated to make way for projects that enrich local officials and developers. Pei Zhu and Tong Wu, the Chinese architects who designed the digital command center for the Olympics, are among the few architects trying to preserve and adapt what remains of the old city. Instead of razing and building over historic neighborhoods, they'll take a factory constructed during Mao's time and refashion it with courtyards and glass walls that offer vistas of the old city. The approach restores Beijing as a city for walkers. Above all it balances the old with the new, a fitting combination for an ancient capital in transition.

As for Mr. Wang, he will likely be among the million or more migrants who will have returned home or moved on to other jobs before the Olympics commence. When the television cameras roll, the city's futuristic vista will have little place for the workers who built it.

BEN McMILLAN, ARCAID/ALAMY



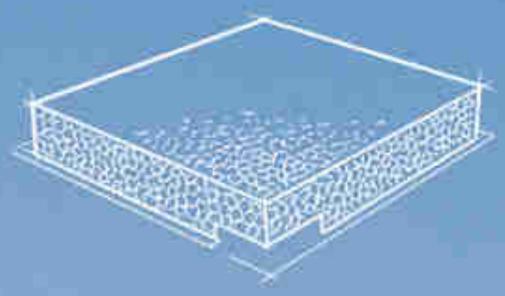
China Central Television Headquarters

Architect: OMA's Rem Koolhaas and Ole Scheeren, the Netherlands/Beijing

Expected completion 2009

CCTV's 768-foot leaning towers connect to form a continuous loop "symbolizing collaboration," says architect Ole Scheeren. Part of a 6.5-million-square-foot complex that rivals the Pentagon in size, this audacious giant (along with the China World Trade Center Tower, at right) crowns Beijing's central business district—a trophy of China's ambition.





National Aquatics Center ("Water Cube")
Architects: PTW, Australia, and CCDI, China
Completed 2008

Based on the structure of soap bubbles, air-filled pockets of translucent plastic (which glow blue at night) form the rectangular face of Beijing's Olympic swimming center. When the games begin, such groundbreaking works may earn Beijing its own share of glory. □



CAR CRAZY

China is still in the dizzying first days of its love affair with the automobile—it has the same number of cars per capita as the United States did in 1915—but it's racing ahead: China recently surpassed Japan as the second largest car market, after the U.S. Car culture has already transformed daily life, with wildly popular car clubs, "self-driving" vacations, and drive-through eateries, not to mention traffic jams and eye-stinging smog.

Number of privately owned cars in China **11,500,000**
Number of additional cars on Beijing roads every day **1,000**
Year the government began encouraging private car ownership in China **1994**

Number of privately owned cars per 1,000 residents in China **9**
In U.S. **450**
Average number of bicycles owned by Chinese families **1**
Year by which China is expected to have more cars than the U.S. does now **2025**

Percent of people driving cars in China today who did not know how to drive three years ago **37**
Number of times higher the death rate from accidents is in China, per 100,000 vehicles, than in the U.S. **4.5**

Rank of China among the hottest markets for Rolls-Royce **1**
Price of the most popular Rolls sold in China **$397,000**
Percent of Chinese car owners surveyed who paid for vehicles in cash **96**

Number of McDonald's drive-throughs in 2005 **1**
Number expected by the end of 2008 **115**
Number of times all the Chinese expressways slated for completion by the end of 2008 would circle the Equator **1.5**



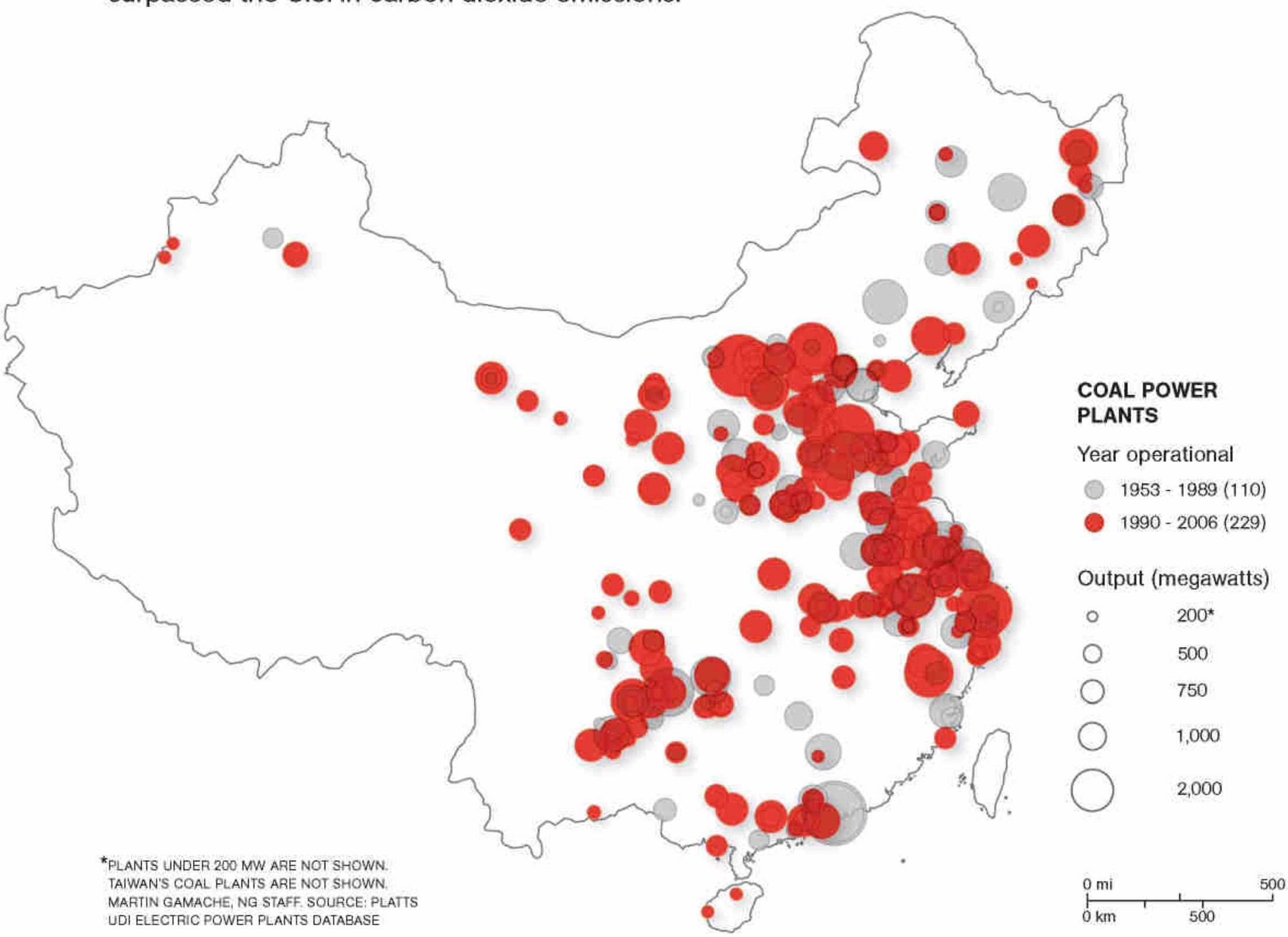
A model strikes a pose with a Chery compact, a Chinese car brand, at the 2005 Shanghai Auto Show.

"CHERY GIRL 1" BY JACQUELINE HASSINK (ABOVE)

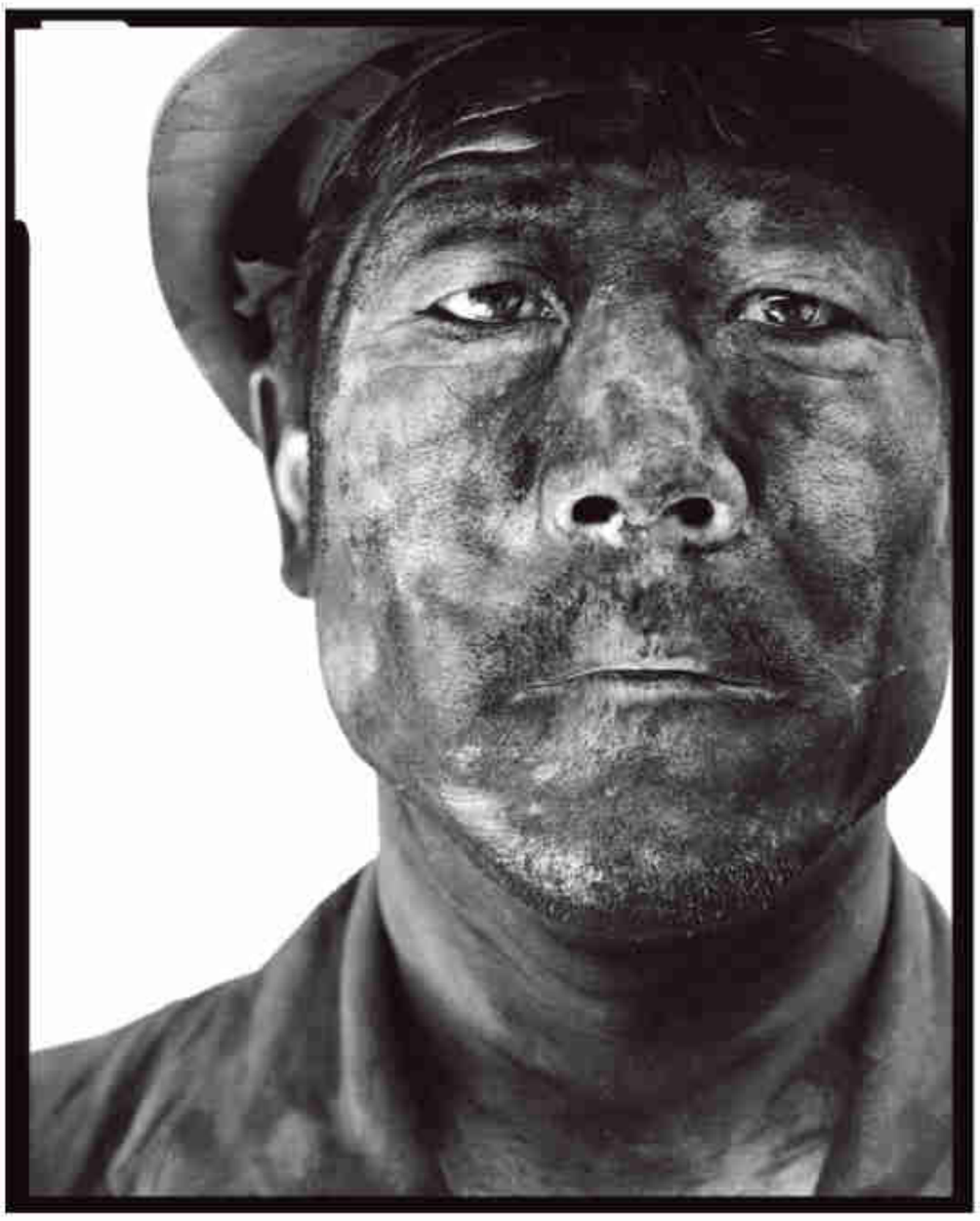
ENERGY

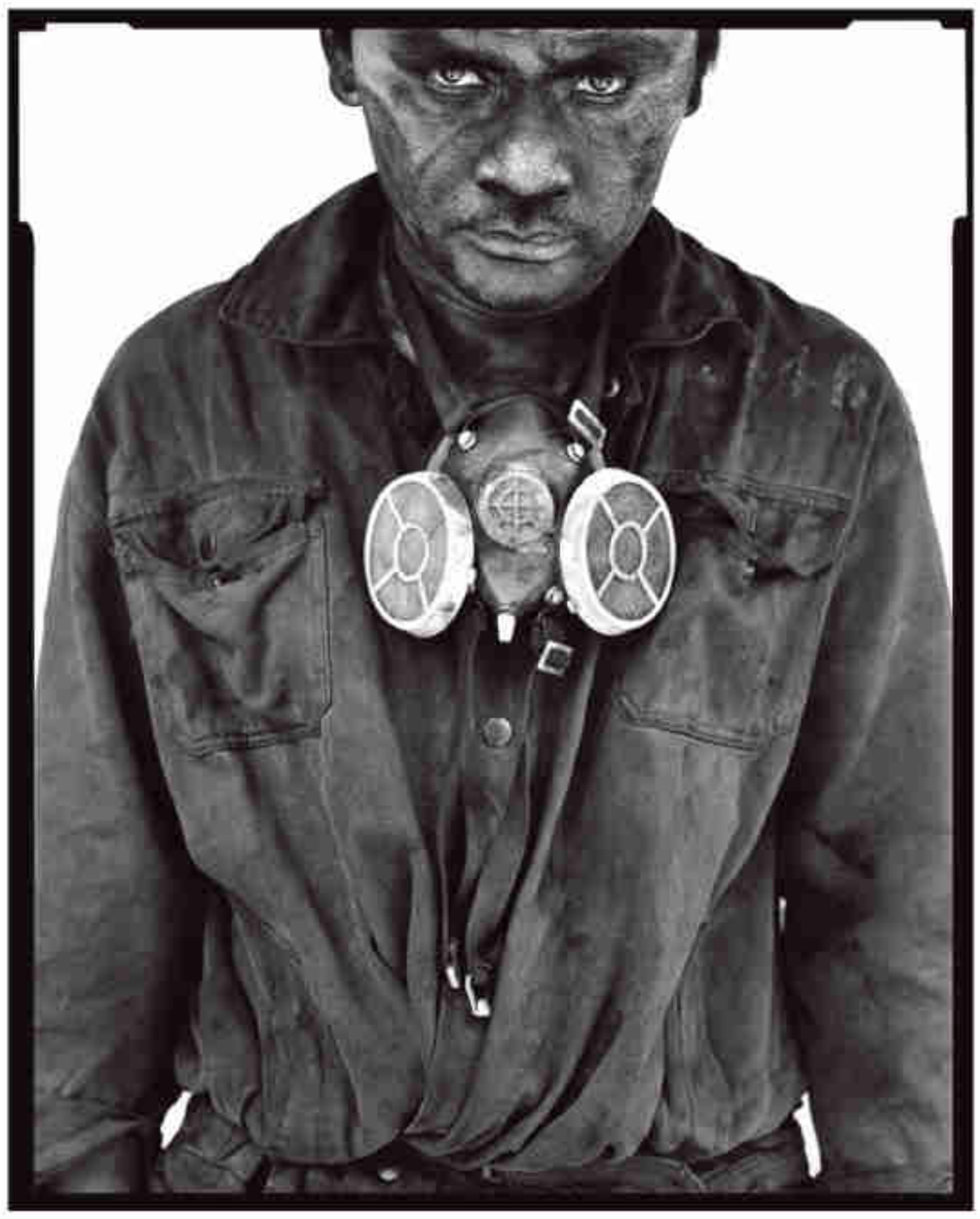
KING COAL

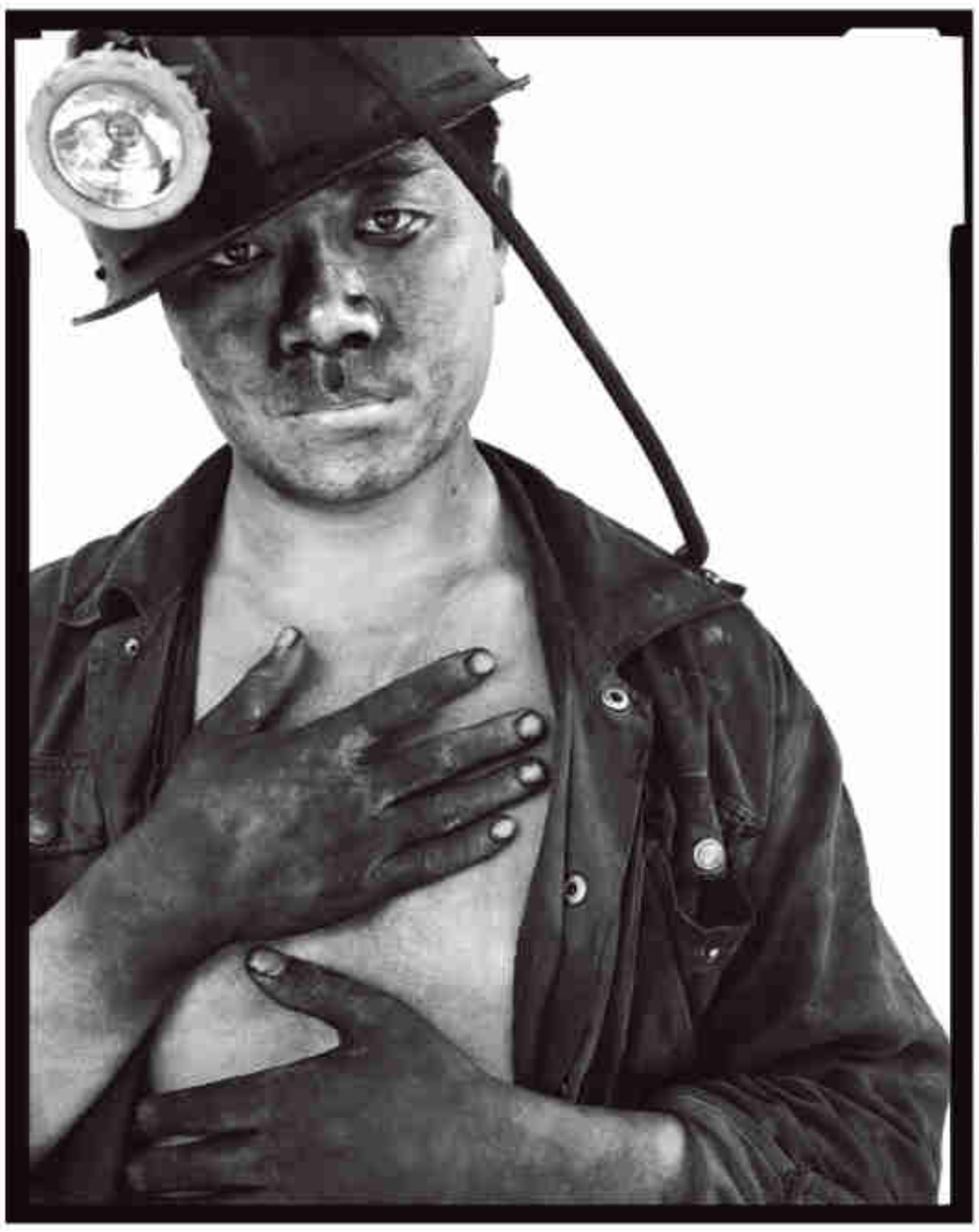
It's cheap, it's dirty, and it's fueling the burgeoning number of electric plants that provide power to China. Coal consumption has more than doubled since 1990, and even the world's largest coal producer can barely keep up. China is constructing the equivalent of two midsize coal-fired power plants each week—adding a capacity comparable to the entire U.K. power grid each year. What does that mean for the planet? China recently surpassed the U.S. in carbon dioxide emissions.

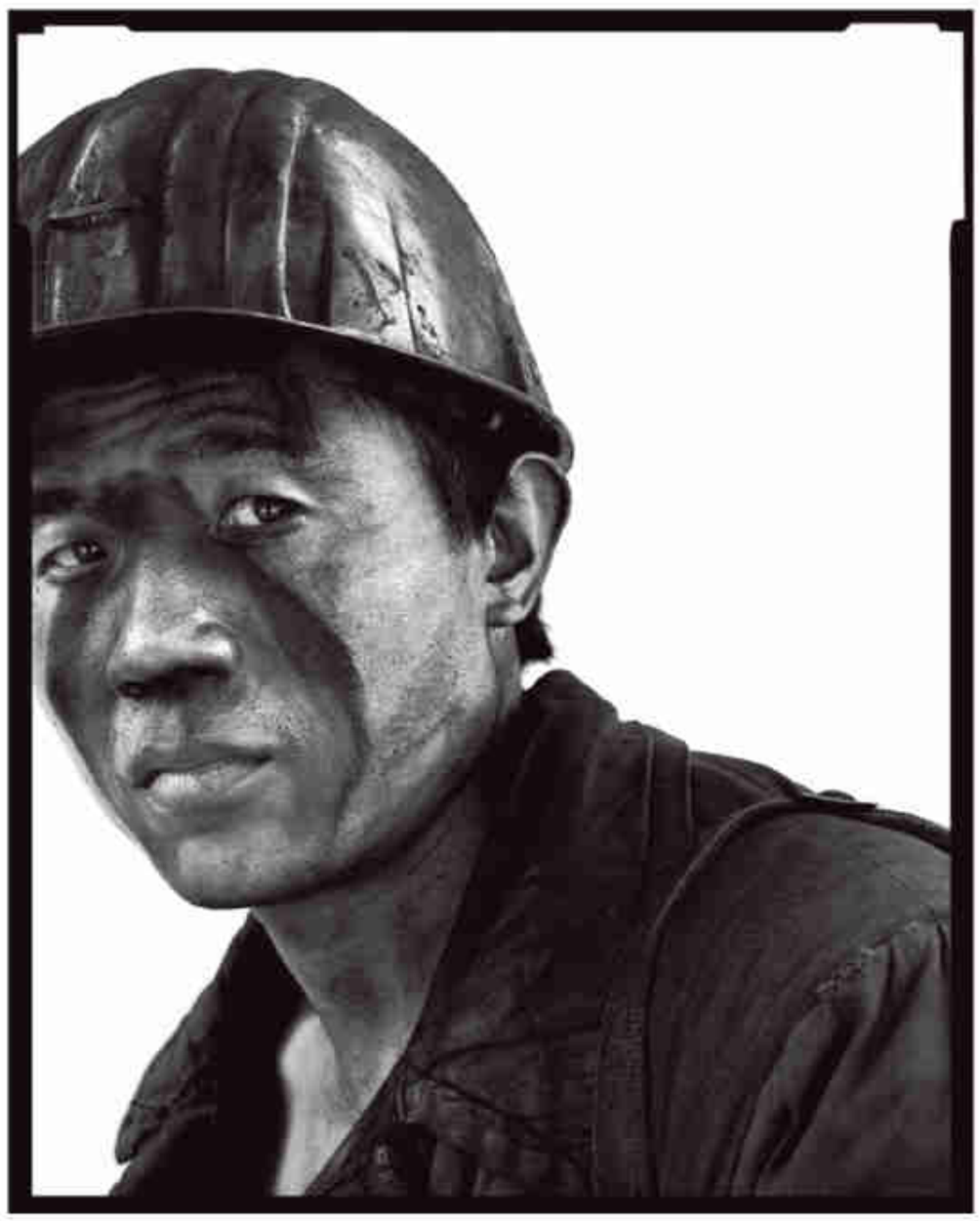


*PLANTS UNDER 200 MW ARE NOT SHOWN.
TAIWAN'S COAL PLANTS ARE NOT SHOWN.
MARTIN GAMACHE, NG STAFF. SOURCE: PLATTS UDI ELECTRIC POWER PLANTS DATABASE









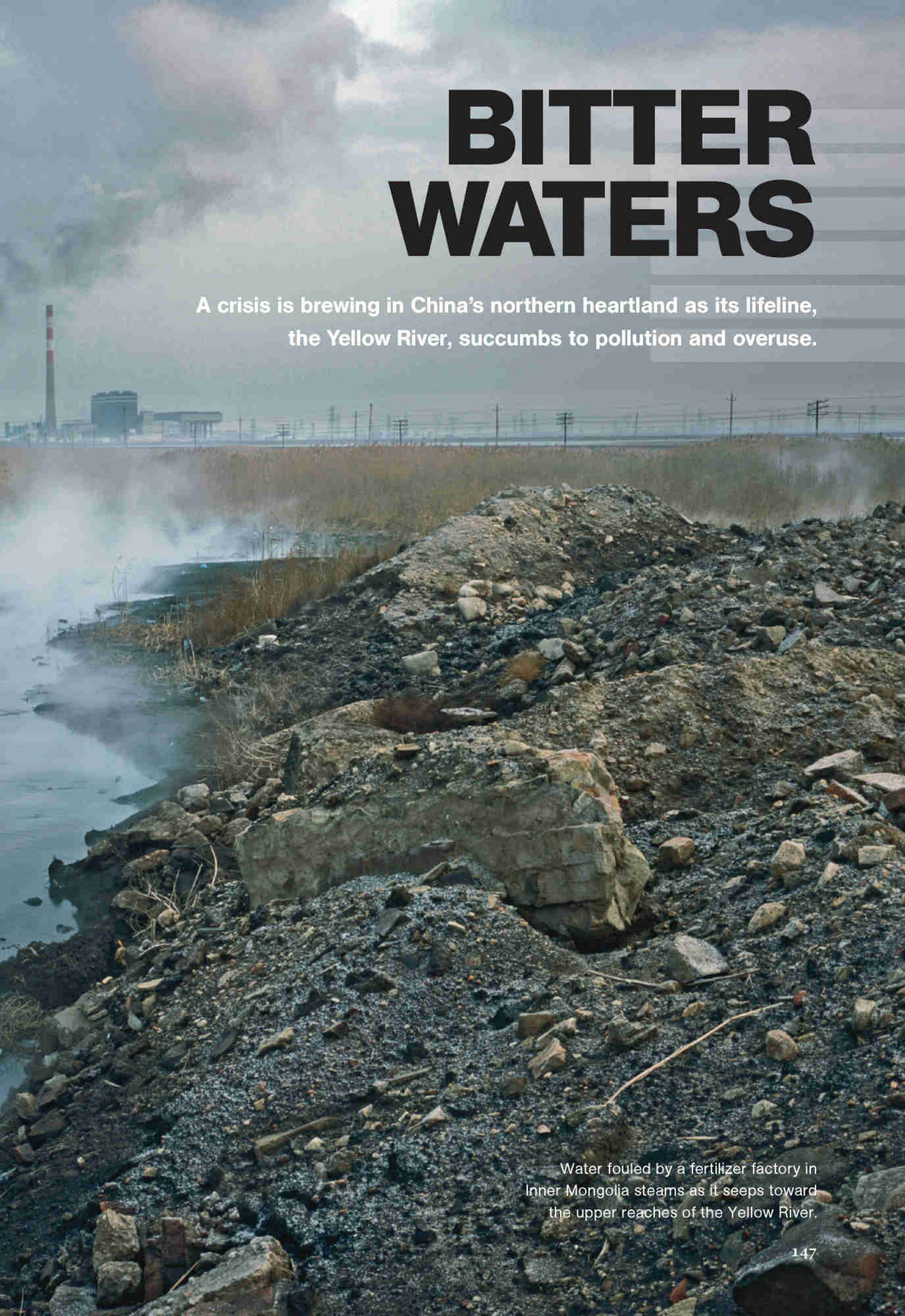
Soot-grimed faces of miners in eastern China testify to the country's insatiable appetite for coal. Thousands of miners die each year in the rush to dig more from often unsafe mines.

FROM "THE MINERS" BY SONG CHAO (ALL)


四隆鑫石油

BITTER WATERS

A crisis is brewing in China's northern heartland as its lifeline, the Yellow River, succumbs to pollution and overuse.



Water fouled by a fertilizer factory in Inner Mongolia steams as it seeps toward the upper reaches of the Yellow River.



Beside her father's deathbed, Wu Qiuhua waits. Within hours Wu Qizhi, 60, was dead from cancer of the esophagus. He lived in Wuxin, one of many "cancer villages" along the lower portion of the Yellow River, where pollution has caused a spike in cancer rates. "No matter what we do," says Wu Qiuhua, "it's useless."





"When the Yellow River is at peace, China is at peace." So says the message on the Sanmenxia Dam, completed in 1960 to help stop chronic flooding. Instead, it slowed the river's current, increasing siltation—and flooding. The only way to fix the dam, says one of its original engineers, is to blow it up.





BY BROOK LARMER
PHOTOGRAPHS BY GREG GIRARD

NOT A DROP OF RAIN has fallen in months, and the only clouds come from sandstorms lashing across the desert. But as the Yellow River bends through the barren landscape of north-central China, a startling vision shimmers on the horizon: emerald green rice fields, acres of yellow sunflowers, lush tracts of corn, wheat, and wolfberry—all flourishing under a merciless sky.

This is no mirage. The vast oasis in northern Ningxia, near the midpoint of the Yellow River's 3,400-mile journey from the Plateau of Tibet to the Bo Hai sea, has survived for more than 2,000 years, ever since the Qin emperor dispatched an army of peasant engineers to build canals and grow crops for soldiers manning the Great Wall. Shen Xuexiang is trying to carry on that tradition today. Lured here three decades ago by the seemingly limitless supply of water, the 55-year-old farmer cultivates cornfields that lie between the ruins of the Great Wall and the silt-laden waters of the Yellow River. From the bank of an irrigation canal, Shen gazes over the green expanse and marvels at the river's power: "I always thought this was the most beautiful place under heaven."

But this earthly paradise is disappearing fast. The proliferation of factories, farms, and cities—all products of China's spectacular economic boom—is sucking the Yellow River dry. What water remains is being poisoned. From the canal bank, Shen points to another surreal flash of color: blood-red chemical waste gushing from a drainage pipe, turning the water a garish purple. This canal, which empties into the Yellow River, once teemed with fish and turtles, he says. Now its water is too toxic to use even for irrigation; two of Shen's goats died within hours of drinking from the canal.

The deadly pollution comes from the phalanx of chemical and pharmaceutical factories above Shen's fields, in Shizuishan, now considered one of the most polluted cities in the world. A robust man with a salt-and-pepper crew cut, Shen has repeatedly petitioned the environmental bureau to stop the unregulated dumping. The local official in charge of enforcement responded by deeming Shen's property "uninhabitable." Declaring that nothing else could be done, the official then left for a new job promoting the very industrial park he was supposed to be policing.

Brook Larmer, author of Operation Yao Ming, *wrote about Bhutan in the March issue. Greg Girard lives in Shanghai and has been covering Asia since 1986.*





"We are slowly poisoning ourselves," says Shen, shaking with anger. "How can they let this happen to our Mother River?"

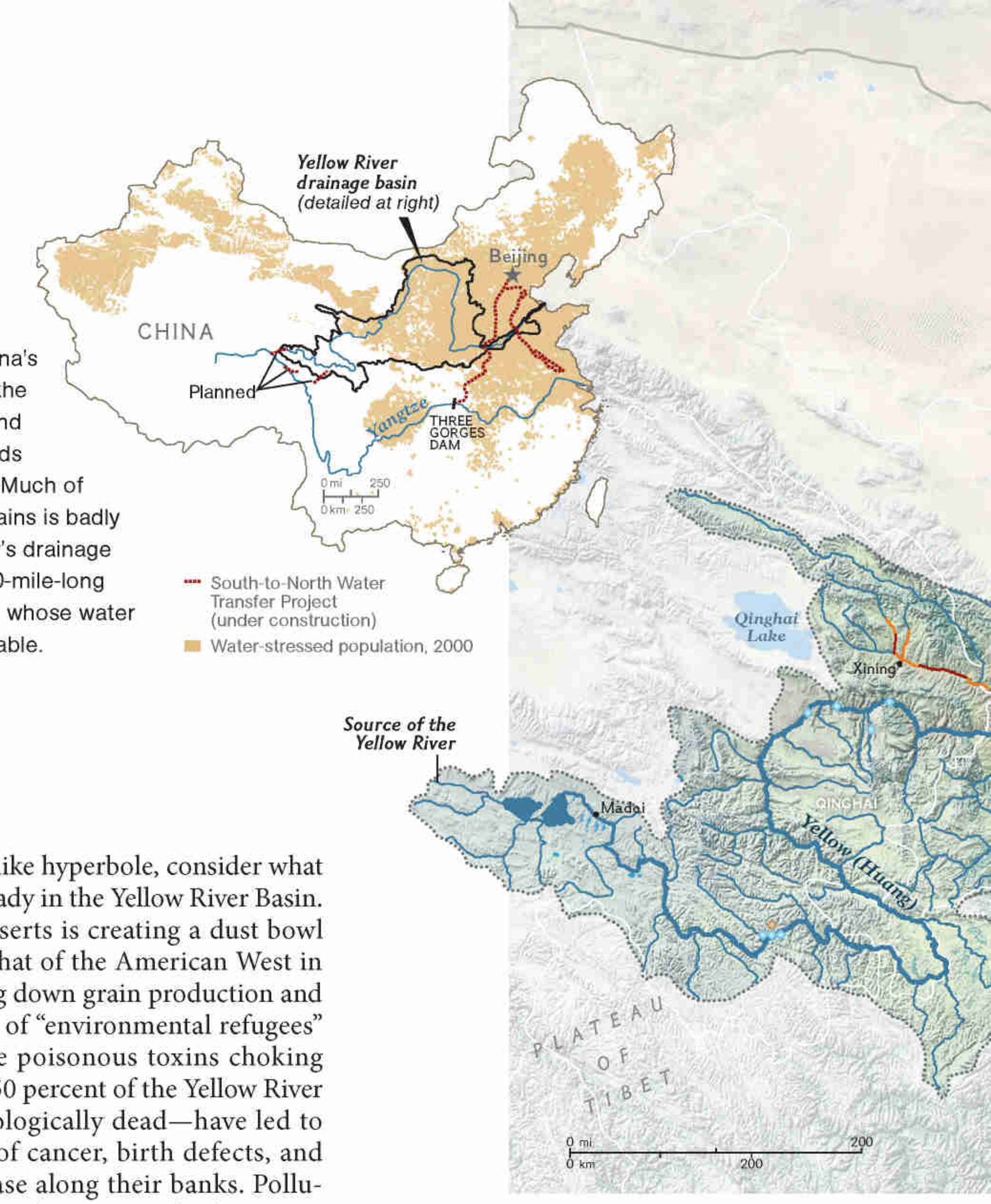
Largest city on the Yellow River, Lanzhou is also among China's most polluted urban areas. During the past 2,500 years the waterway has overflowed and changed course more than 1,500 times, earning it the epithet "China's Sorrow."

FEW WATERWAYS CAPTURE the soul of a nation more deeply than the Yellow, or the Huang, as it's known in China. It is to China what the Nile is to Egypt: the cradle of civilization, a symbol of enduring glory, a force of nature both feared and revered. From its mystical source in the 14,000-foot Tibetan highlands, the river sweeps across the northern plains where China's original inhabitants first learned to till and irrigate, to make porcelain and gunpowder, to build and bury imperial dynasties. But today, what the Chinese call the Mother River is dying. Stained with pollution, tainted with sewage, crowded with ill-conceived dams, it dwindles at its mouth to a lifeless trickle. There were many days during the 1990s that the river failed to reach the sea at all.

The demise of the legendary river is a tragedy whose consequences extend far beyond the more than 150 million people it sustains. The Yellow's plight also illuminates the dark side of China's economic miracle, an environmental crisis that has led to a shortage of the one resource no nation can live without: water.

Water has always been precious in China, a country with roughly the same amount of water as the United States but nearly five times the population. The shortage is especially acute in the arid north, where nearly half of China's population lives on only 15 percent of its water. These accidents of history and geography made China vulnerable; a series of man-made shocks are now pushing it over the edge. Global warming is accelerating the retreat of the glaciers that feed China's major rivers even as it hastens the advance of deserts that now swallow up a million acres of grassland each year.

Nothing, however, has precipitated the water crisis more than three decades of breakneck industrial growth. China's economic boom has, in a ruthless symmetry, fueled an equal and opposite environmental collapse. In its race to become the world's next superpower, China is not only draining its rivers and aquifers with abandon; it is also polluting what's left so irreversibly that the World Bank warns of "catastrophic consequences for future generations."



PARCHED AND POLLUTED

Roughly half of China's population lives in the north, where demand for water far exceeds the natural supply. Much of the water that remains is badly tainted: The Yellow's drainage basin feeds a 3,400-mile-long river, 50 percent of whose water is deemed undrinkable.

If that sounds like hyperbole, consider what is happening already in the Yellow River Basin. The spread of deserts is creating a dust bowl that may dwarf that of the American West in the 1930s, driving down grain production and pushing millions of "environmental refugees" off the land. The poisonous toxins choking the waterways—50 percent of the Yellow River is considered biologically dead—have led to a spike in cases of cancer, birth defects, and waterborne disease along their banks. Pollution-related protests have jumped—there were 51,000 across China in 2005 alone—and could metastasize into social unrest. Any one of these symptoms, if unchecked, could hinder China's growth and reverberate across world markets. Taken together, the long-term impact could be even more devastating. As Premier Wen Jiabao has put it, the shortage of clean water threatens "the survival of the Chinese nation."

The Yellow River's epic journey across northern China is a prism through which to see the country's unfolding water crisis. From the Tibetan nomads leaving their ancestral lands near the river's source to the "cancer villages" languishing in silence near the delta, the Mother River puts a human face on the costs of environmental destruction. But it also shows how this emergency is shocking the government—and a small cadre of environmental activists—into action. The fate of the Yellow River still hangs in the balance.

SITTING ON A RIDGE nearly three miles above sea level, a rosy-cheeked Tibetan herder with two gold teeth looks out over the highlands her family has roamed for generations. It is a scene of stark beauty: rolling hills blanketed by sprouts of summer grass; herds of yaks and sheep grazing on distant slopes; and in the foreground a clear, shallow stream that is the beginning of the Yellow River. "This is sacred land," says the woman, a 39-year-old mother of four



named Erla Zhuoma, recalling how her family of nomads would rotate through here to graze their 600 sheep and 150 yaks. No longer, she says, shaking her head in dismay. "The drought has changed everything."

The first signs of trouble emerged several years ago, when the region's lakes and rivers began drying up and grasslands started withering away, turning the search for her animals' food and water into marathon expeditions. Chinese scientists say the drought is a symptom of global warming and overgrazing. But Zhuoma blames the misfortune on outsiders—members of the ethnic Han Chinese majority—who angered the gods by mining for gold in a holy mountain nearby and fishing in the sacred lakes at the Yellow River's source. How else could she comprehend the death by starvation of more than half of her animals? Fearing further losses, Zhuoma and her husband accepted a government offer to sell off the rest in exchange for a thousand-dollar annual stipend and a concrete-block house in a resettlement camp near the town of Madoi. The herders are now the herded, nomads with nowhere to go.

China's water crisis begins on the roof of the world, where the country's three renowned

The proliferation of factories, farms, and cities—all products of

rivers (the Yellow, the Yangtze, and the Mekong) originate. The glaciers and vast underground springs of the Qinghai-Tibet plateau—known as China's "water tower"—supply nearly 50 percent of the Yellow River's volume. But a hotter, drier climate is sending the delicate ecosystem into shock. Average temperatures in the region are increasing, according to the Chinese weather bureau, and could rise as much as three to five degrees Celsius by the end of the century. Already, more than 3,000 of the 4,077 lakes in Qinghai Province's Madoi County have disappeared, and the dunes of the high desert lap menacingly at those that remain. The glaciers, meanwhile, are shrinking at a rate of 7 percent a year. Melting ice may add water to the river in the short term, but scientists say the long-term consequences could be fatal to the Yellow.

To save its great rivers, Beijing is performing a sort of technological rain dance, with the most ambitious cloud-seeding program in the world. During summer months, artillery and planes bombard the clouds above the Yellow River's source area with silver iodide crystals, around which moisture can collect and become heavy enough to fall as rain. In Madoi, where the thunderous explosions keep Zhuoma's family awake at night, the meteorologists staffing the weather station say the "big gun" project is increasing rainfall and helping replenish glaciers near the Yellow River's source. Local Tibetans, however, believe the rockets, by angering the gods once more, are perpetuating the drought.

Like thousands of resettled Tibetan refugees across Qinghai, Zhuoma mourns the end of an ancient way of life. The family's wealth, once measured by the size of its herds, has dwindled to the few adornments she wears: three silver rings, a stone necklace, and her two gold teeth. Zhuoma has no job, and her husband, who rents a tractor to make local deliveries, earns three dollars on a good day. Not long ago the family ate meat every day; now they get by on noodles and fried dough. "We have no choice but to adjust," she says. "What else can we do?" From her concrete home, Zhuoma can still see the silvery beginnings of the Yellow River, but her relationship to the water and the land—to her heritage—has been lost forever.

"WHAT ARE YOU DOING?" the security guard demands. "Nothing," replies the stocky woman lurking outside the gates of the paper mill, tucking her secret weapon—a handheld global positioning device—under her sweater. The guard eyes her for a minute, and the woman, a 51-year-old laid-off factory worker named Jiang Lin, holds her breath. When he turns away, she pulls out the GPS and quickly locks in the paper mill's coordinates.

As an employee of Green Camel Bell, an environmental group in the western city of Lanzhou, Jiang is following up on a tip that the mill is dumping untreated chemical waste into a tributary of the Yellow River. There are hundreds of such factories around Lanzhou, a former Silk Road trading post that has morphed into a petrochemical hub. In 2006 three industrial spills here made the Yellow River run red. Another turned it white. This one is tainting the tributary a toxic shade of maroon. When Jiang gets back to the office, the GPS data will be emailed to Beijing and uploaded onto a Web-based "pollution map" for the whole world to see.

For all of Lanzhou's pride in being the first and biggest city along the Yellow River, it is better known for its massive discharge of industrial and human waste. But even here there is a glimmer of hope: the first seedlings of environmental activism, which may be the only chance for the river's salvation. In the mid-1990s a mere handful of environmental groups existed in China. Today there are several thousand, including Green Camel Bell. Jiang Lin's 25-year-old son, Zhao Zhong, founded the group in 2004 to help clean up the city and protect the Yellow River. With only five paid staff, Green Camel Bell is a

Low water exposes sandbars near the town of Qikou in Shanxi Province, and along many other stretches. With so much water diverted for irrigation and industry, the Yellow River ran dry before reaching its terminus—the Bo Hai sea—in all but one year during the 1990s.

China's spectacular economic boom—is sucking the Yellow River dry.





To move water from southern China to water-starved parts of the north, a massive 62-billion-dollar network of concrete conduits is now under construction—including a pipe (above) that runs beneath the Yellow River. Water delivery to Beijing begins this year.

shoestring operation kept afloat by grants from an American NGO, Pacific Environment. The name they chose, after the reassuring bells worn by camels in Silk Road caravans, is meant to be "a sign of life," says Jiang. "The bell is supposed to give hope to everyone who hears it."

At long last Beijing appears willing to listen. After three decades blindly pursuing growth, the government is starting to grapple with the environmental costs. The impact is not simply monetary, though the World Bank calculates that environmental damage robs China of 5.8 percent of its GDP each year. It is also social: Irate citizens last year flooded the government with hundreds of thousands of official environmental complaints. Whether to save the environment or stave off social unrest, Beijing has adopted ambitious goals, aiming for a 30 percent reduction in water consumption and a 10 percent decrease in pollution discharges by 2010.

Yet despite the good intentions, the crisis is only getting worse, reflecting Beijing's loss of control over the country's growth-hungry provinces. Leading environmental lawyer Wang Canfa estimates that "only 10 percent of environmental laws are enforced." Unable to count on its own bureaucracy, Beijing has warily embraced the media and grassroots activists to help pressure local industry. But pity the ecological crusader who speaks out too much. He could end up like Wu Lihong, an activist who was jailed and allegedly tortured last year for publicizing the toxic algal blooms in central China's Tai Lake.

Back in the Green Camel Bell office, Jiang stresses the group's cordial relations with local authorities. "The government has been working hard to stop factories from dumping," she says. Nevertheless, along her office wall stand plastic bottles filled with water discharged by factories and ranging in color from yellow to magenta—all unanalyzed for lack of funds. Even with its modest resources, Green Camel Bell has mobilized volunteers to help survey the ecology of the 24-mile section of the Yellow River that flows through Lanzhou. Their most important, and stealthiest, work is publicly exposing the most egregious polluters. It's enough to give a laid-off worker a sense of power and purpose. "I feel like a detective," says Jiang, laughing about her narrow escape at the paper mill. "But ordinary people like me have to get involved. Pollution is a problem that affects us all."

TWO HUNDRED MILES northeast of Lanzhou, the Yellow River carves a path through the desolate expanse of Ningxia, revealing a problem with even more devastating long-term consequences than pollution: water scarcity. China starts at a disadvantage, supporting 20 percent of the world's population with just 7 percent of its fresh water. But it is far worse here in Ningxia, a bone-dry region enduring its worst drought in recorded history. For millennia the Yellow River was Ningxia's salvation; today the waterway is wasting away. Near the city of Yinchuan, the river's once mighty current is

reduced to a narrow channel. Locals blame the river's depletion on the lack of rain. But the biggest culprit is the extravagant misuse of water by rapidly expanding farms, factories, and cities.

Perhaps every revolution, even a capitalist one, eats its children. But the pace at which China is squandering its most precious resource is staggering. Judicious releases of reservoir water have averted the embarrassment of recent years, when the Yellow River ran completely dry. But the river's outflow remains just 10 percent of the level 40 years ago. Where has all the water gone? Agriculture siphons off more than 65 percent, half of which is lost in leaky pipes and ditches. Heavy industry and burgeoning cities swallow the rest. Water in China, free until 1985, is still so heavily subsidized that conservation and efficiency are largely alien concepts. And the siege of the Yellow River isn't about to stop: In 2007 the government approved 52 billion dollars in coal mining and chemical industries to be installed along a 500-mile stretch of the river north of Yinchuan.

Such frenzied growth may soon fall victim to the very water crisis it has helped create. Of the some 660 cities in China, more than 400 lack sufficient water, with more than a hundred of these suffering severe shortages. (Beijing is chronically short of water too, but it will be spared during the Olympics, thanks to engineering feats that divert water from the Yellow River.) In a society increasingly divided between urban and rural, rich and poor, it is China's vast countryside—and its 738 million peasants—that bears the brunt of the water shortage.

The lack of water is already hindering China's grain production, fueling concerns about future shocks to global grain markets, where even modest price hikes can have a disastrous effect on the poor. Wang Shucheng, China's former minister of water resources, put the situation dramatically: "To fight for every drop of water or die, that is the challenge facing China."

For Sun Baocheng, a sunbaked 37-year-old farmer from the central Ningxia village of Yanghe, this challenge is not merely rhetorical excess. Two years ago, after their wells and rain buckets went dry from drought, all 36 families in Yanghe abandoned their village to the encroaching desert. They came to a valley called Hongsipu, where more than 400,000 environmental refugees have settled for one reason: It has water, delivered by a Kuwaiti-funded aqueduct that snakes across the scrub desert from the Yellow River, 20 miles to the north. The Yanghe villagers have settled in a row of single-room brick houses near the concrete aqueduct, tending plots of land given by the Chinese government (along with about $25 a person) as part of a program to alleviate poverty and desertification.

Even though Sun is barely able to coax a few stalks of corn out of the sandy soil, he is inspired by the flourishing crops—and growing wealth—of more established refugees. "If we hadn't left our old village and come here," he says, "we wouldn't have survived." The Mother River, once again, is giving life. But with all the pressures on its dwindling water, one wonders: What will creating another oasis in the desert do to the river's own chances of survival?

MAO ZEDONG'S MANTRA—"Sacrifice one family, save 10,000 families"—is still seared into Wang Yangxi's memory. Like the Chinese emperors before him, Chairman Mao was obsessed with taming the Yellow River, the life-giving force whose changes of course also unleashed devastating floods, earning it the enduring sobriquet "China's Sorrow." When, in 1957, construction began on the massive dam at Sanmenxia, on the river's middle section, 400,000 people—including Wang—lost their homes. Mao's slogan convinced them it was a noble sacrifice. "We were proud to help the national cause," says Wang, now 83. "We've had nothing but misery ever since."

The idea of conquest has driven China's approach to nature ever since Yu the Great, first ruler of the Xia dynasty, allegedly declared some 4,000 years ago: "Whoever controls the Yellow River controls China." Mao took this, like much else, to extremes. His biggest monument to man's power over nature—the 350-foot-tall



On an arid expanse of the Loess Plateau, farmer Ren Guibao trudges uphill with cornstalks he'll burn as fuel. Rare rains wash the loose yellow soil down gullies to the river, tinting the water its namesake color. Sediments choke some stretches of the Yellow, hindering its ability to flush out pollutants.

To save its great rivers, Beijing is performing a sort of technological

Sanmenxia Dam—is a case study in the danger of unintended consequences. The dam has tamed the lower third of the Yellow River by turning it into what one commentator has called "the country's biggest irrigation ditch." But the impact upriver has been disastrous, due to a stunning lack of foresight. Engineers failed to account for the colossal amount of yellowish silt (more than three times the sediment discharge of the Mississippi) that gives the river its name. By mismanaging the silt, Sanmenxia has caused as many floods as it has prevented, ruined as many lives as it has saved, and compelled the construction of another huge dam simply to correct its mistakes. One of Sanmenxia's original engineers even recommends blowing up the whole thing.

Wang would be the first to volunteer for such a mission. Husking cotton on his doorstep in Taolingzhai village, about 30 miles west of Sanmenxia, the bristle-haired former schoolteacher recalls a life whose every tragic twist has been shaped by the dam. After Wang and his family were evicted from this fertile land during the dam's construction, they were banished to a desert region 500 miles away. Nearly a third of the refugees died of starvation during Mao's Great Leap Forward, he says. Eventually, half of the survivors straggled home. Wang now farms land near the junction of the Wei and Yellow Rivers. But even here, he is not safe. When heavy rains fall, the Sanmenxia reservoir backs up, pushing polluted water over the banks. Three floods in five years have destroyed his cotton crops and poisoned the village's drinking supply. "All of our young people have left," says Wang. "There's no future here."

Unlike Mao's little red book, the Sanmenxia Dam is hardly a relic of the past. China now boasts nearly half of the world's 50,000 large dams—three times more than the United States—and construction continues. A cascade of 20 major dams already interrupt the Yellow River, and another 18 are scheduled to be built by 2030. Grassroots resistance to dams has emerged, most famously over the forced resettlement of more than a million people by the Yangtze River's Three Gorges Dam, but to little effect. Ma Jun, a prominent environmentalist, says dams on the Yellow River are especially harmful, since they exacerbate the twin threats of pollution and scarcity. The reduced water flow destroys the river's ability to flush out heavy pollutants, even as standing reservoirs allow a badly overused river to be drained even further. "Why cannot human beings give up their ruthless ambition of harnessing and controlling nature," Ma asks, "and choose instead to live in harmony with it?"

The simple answer: Beijing is still addicted to growth. The economic boom has lifted hundreds of millions of Chinese out of poverty, and the Communist Party's legitimacy, perhaps even its survival, depends on continued expansion. China's leaders pay lip service to conservation and efficiency as a solution to the north's chronic water shortage. But rather than raise the price of water to true market levels—a move that would surely alienate both the masses and big industry—they have opted instead for another pharaonic feat of engineering: the South-to-North Water Transfer Project. The 62-billion-dollar canal system, which is designed to relieve pressure on the Yellow River, will siphon some 12 trillion gallons of water a year from the Yangtze Basin and send it 700 miles north, passing beneath the Yellow in two places. It's no surprise, given the Olympian scale of the project, that it—like Sanmenxia—originated as one of Mao's pipe dreams.

EVEN AS OTHER PARTS OF CHINA careened through droughts and floods in past decades, the village of Xiaojiadian enjoyed a steady supply of fresh water by virtue of its location on a tributary of the Yellow River, less than 200 miles from where it spills into the sea. But the waters, once a source of life, have turned deadly. Nobody here likes to talk about the plague that has struck the village, but the scar running down the chest of a gaunt farmer named Xiao Sizhu has its own eloquence. It shows precisely where doctors tried to remove the cancerous tumor gnawing at his esophagus. In between bites of sodden bread—one of the only foods he can digest—Xiao, 55, whispers about the old days,

rain dance, with the most ambitious cloud-seeding program in the world.



Shooting for rain, meteorologist Huang Binming (right) and his crew launch canisters of silver iodide into the sky near Madoi. This cloud-seeding program has increased rainfall close to the river's source, says Binming, though some Tibetans complain these noisy fusillades anger the gods. "People in our city don't think that way," says Binming. "They are very cooperative."



No longer willing to drink putrid river water, residents of Nagao use long plastic tubes to tap a single well. China's groundwater usage has almost doubled since 1970. Today two-thirds of the nation's total water consumption comes from aquifers, and the water table keeps falling.


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The drive to consume clouds the road ahead in Liulin, where a coal-fired power plant helps fuel an energy-hungry China. Environmentalists say that greenhouse gases are contributing to the death of the Yellow River, but economists warn that a slowdown in China could lead to political instability—even chaos.

After three decades blindly pursuing growth, China's government is

when his family felt lucky to live in this well-watered corner of the river basin, in eastern Shandong Province. Over the past two decades, however, a parade of tanneries, paper mills, and factories arrived upstream, dumping waste directly into the river. Xiao used to swim and fish in the eddy next to the village well. Now, he says, "I never go close to the water because it smells awful and has foam on top."

Another place he avoids is the grove of poplar trees outside the village, with its burial mounds stretching to the river's edge. In the past five years more than 70 people in this hamlet of 1,300 have died of stomach or esophageal cancer. More than a thousand others in 16 neighboring villages have also succumbed. Yu Baofa, a leading Shandong oncologist who has studied the villages of Dongping County, calls it "the cancer capital of the world." He says the incidence of esophageal cancer in the area is 25 times higher than the national average.

The more than four billion tons of wastewater dumped annually into the Yellow River, accounting for a full 10 percent of the river's volume, has pushed into extinction a third of the river's native fish species and made long stretches unfit even for irrigation. Now comes the human toll. In a 2007 report China's Ministry of Health blamed air and water pollution for an alarming rise in cancer rates across China since 2005—19 percent in urban areas and 23 percent in the countryside. Nearly two-thirds of China's rural population, more than 500 million people, use water contaminated by human or industrial waste. It's little wonder that gastrointestinal cancer is now the number one killer in the countryside.

The ubiquity of pollution-related disease is cold comfort to the villagers in Xiaojiadian, who live in fear and shame. The fear is understandable: 16 more cases of cancer were diagnosed in the village last year. The shame, however, has deeper roots. Even though officials told villagers the epidemic likely stems from the drinking well by the poisoned river, many locals believe cancer comes from an imbalance of chi, or life force, which is said to occur more frequently in those with quick tempers or bad characters.

Like most victims, Xiao suffered in silence in his house for nearly a year, hiding his symptoms even from the local doctor. Medical bills have since wiped out his savings, and the tumor has reduced his voice to a whisper. Even so, Xiao is one of the few willing to speak out. "If we don't talk, nothing gets done," he rasps, spitting up phlegm into a plastic cup. The government recently built a new well 11 miles away and sent in teams of doctors. But Xiao says officials might not have paid attention to Xiaojiadian had a villager not tipped off a reporter at a Chinese television station two years before. Now Xiao only has one regret: that he didn't speak out earlier. "It might have saved me," he says.

A few months pass, and a fresh earthen mound appears in the grove of poplar trees by the river. The grave has no tombstone, just some bamboo sticks and a few aluminum cookie wrappers rustling in the breeze. Xiao has come to the place he long avoided, joining friends and neighbors who were stalked by the same waterborne assassin. Is it a cruel irony or just the natural order that their final resting place overlooks the very river that likely killed them?

It is too late to save Xiao Sizhu, but there remains a flicker of hope that the Yellow River can be rescued. China's leaders, aware of the peril their country faces, now vow "to build an ecological civilization," setting aside almost 200 billion dollars a year for the environment. But the future depends equally on ordinary citizens such as activists Zhao Zhong and his mother, the intrepid Jiang Lin. Remember that Lanzhou paper mill Jiang locked in with her GPS? Not long after the information went up on the Internet, the government shut down the mill, along with 30 other factories dumping poison into tributaries of the Yellow River.

"Maybe the impact of one single person is small," says Zhao. "But when it is combined with others, the power can be huge." □

Dirty Work An interactive map with more of Greg Girard's photos shows the toll of explosive growth along the Yellow River's banks at **ngm.com.**

starting to grapple with the environmental costs.



Keeping your balance while moving ahead—that's the trick for children playing inside plastic bubbles on a lake in Shizuishan. It's also the challenge for China, where balance is a Confucian value—"harmony" is a national watchword—but where an environmental crisis poses a global question: Can we keep on growing without destroying ourselves?

FACTORY TO THE WORLD

Try finding a coffeemaker, an iPod, or birthday candles not made in China, and you'll see the results of what American manufacturers call the "China price": Goods can be made so cheaply in China that it's cornered the market on many products. For Americans, the flip side of lost factory jobs is an abundance of good deals at Wal-Mart. And despite scares over lead-laced Barbies and tainted pet food, the goods keep on coming, making China's Guangdong Province the world's manufacturing mecca. For every shipping container bringing materials into Guangdong's port, nine go out filled with exports.

Percent of the world's umbrellas made in China **70**
Percent of the world's buttons made in China **60**

Percent of U.S. shoes made in China **72**
Percent of U.S. kitchen appliances made in China **50**

Percent of U.S. artificial Christmas trees made in China **85**
Percent of U.S. toys made in China **80**

Percent of Chinese goods sent to the U.S. that end up on Wal-Mart's shelves **9**
Percent of the unsafe toys recalled in the U.S. in 2007, including Thomas the Tank Engine, that were made in China **100**

Number of months a Chinese factory worker would need to work to earn the cost of a Thomas the Tank Engine train set **6**

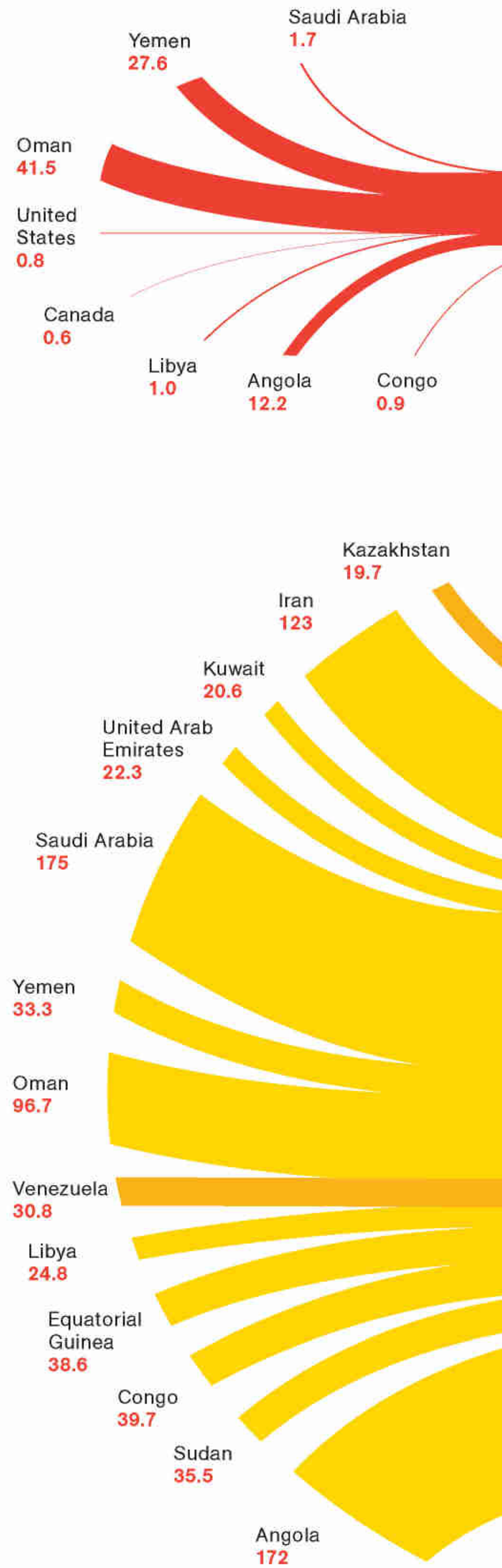


Workers make toy guns at the Gealex factory in the city of Shenzhen, where women workers outnumber men.

FROM "THE REAL TOY STORY" BY MICHAEL WOLF, LAIF/REDUX (ABOVE)

HUNGRY FOR OIL

There's a new contender for the world's oil. Up until the early 1990s, China produced most of the oil it needed to keep its economic engine running, but breakaway growth in transportation and plastics production doubled China's oil consumption. Imports have swelled over sixfold in the past decade as China woos oil-rich countries, such as Angola and Sudan, with investments and loans while largely ignoring corruption and human rights abuses. China's demand has helped drive up oil prices to record highs, causing pain at the gas pump for drivers around the world.



Iran
16.9

Russia
2.3

Australia
1.4

1996

TOTAL
Millions of barrels **165.9***

Papua New Guinea
3.5

Malaysia
1.6

Vietnam
7.4

Indonesia
46.2

Others
0.2

COUNTRIES EXPORTING OIL TO CHINA

Russia
117.1

2006

Europe / Asia **136.8** (12.9% of China's oil imports)

Middle East **470.9** (44.2%)

TOTAL
Millions of barrels **1,064.6***

Latin America **30.8** (2.9%)

Africa **310.6** (29.2%)

Other countries **115.1** (10.8%)

*Numbers are rounded and do not equal totals.

CHART BY 5W INFOGRAPHICS. SOURCE: GLOBAL TRADE INFORMATION SERVICES, INC

THE ROAD AHEAD

China's expectations are rising, with no end in sight. What's next?

Fragile nature meets technological ambition in the labor-roughened hands of a track worker. Li Yingde captured this snow finch while working on a new high-altitude section of China's 2,525-mile Beijing-to-Lhasa railway.

BY PETER HESSLER
PHOTOGRAPHS BY FRITZ HOFFMANN

THE GENESIS of a Chinese factory town is always the same: In the beginning nearly everybody is a construction worker. The booming economy means that work moves fast, and new industrial districts rise in distinct stages. Those early laborers are men who have migrated from rural villages, and immediately they're joined by small entrepreneurs. These pioneers sell meat, fruit, and vegetables on informal stands, and later, when the first real stores appear, they stock construction materials. After that cell phone companies set up shop: China Mobile, China Unicom. They deal prepaid phone cards to migrants; in the southeastern province of Zhejiang, one popular product is called the Homesick Card. During these initial stages there's rarely any sign of police. Government officials are prominently absent. It's not until plants start production that you see many women. Assembly-line bosses prefer young female workers, who are believed to be more diligent and manageable. After the women appear, so do the clothes shops. It's amazing how quickly a shoe store emerges from a barren strip of factories, like a flower in a broken sidewalk. In the early days garbage accumulates in the gutters; the government is never in a rush to institute basic services. Public buses don't appear for months. Manholes remain open till the last instant, for fear that early settlers will steal the metal covers and sell them for scrap.

Over a two-year period, I traveled repeatedly to Zhejiang, watching factory towns rise from the farmland. Every time, I rented a car and followed a brand-new highway that connected the boomtowns of tomorrow. I drove the road for six months before noticing any clear indication of local authority. That's when I began to receive speeding tickets—$20 each, three or four every journey. They were issued by automated cameras, usually in places where the posted speed limit mysteriously dropped without warning. I collected violations in factory towns all across the province: in Jinhua, known for producing brassieres; in Lishui, maker of synthetic leather; in Qiaotou, famous for buttons and zippers.

Fines were deducted from my deposit at the Prosperous Automobile Rental Company. "It's a good business for the police," the rental company boss told me. Later I learned that individual cops invested in cameras as private entrepreneurs with a stake in profits. The boss told me to memorize the camera locations, but I was never able to do that. It was hard enough to manage every trip so I always returned the car with an empty tank. That was Prosperous Automobile's business strategy: Whenever they rented out a vehicle, they made sure it had just enough fuel to make it to a gas station. If I returned a car with so much as a gallon in the tank, it would be siphoned off and sold—another profit in the cutthroat world of Chinese business.

THE POET John Greenleaf Whittier, who marveled at the early industry of Lowell, Massachusetts, described the "city springing up, like the enchanted palaces of the Arabian tales, as it were in a single night." Today it's the factory towns of China that seem to be conjured up from another world. The sheer human energy is overwhelming: the fearless entrepreneurs, the quick-moving builders, the young migrants. Virtually everybody has been toughened by the past; families remember well the poverty of the Mao period. Meanwhile most Chinese have seen their living standards rise in recent years, often dramatically. This combination—the struggles of the past, the opportunities of the present—has created a uniquely motivated population. It's hard to imagine another place where people are more willing to work.

But few Chinese spend much time thinking about the future. Decades of political turmoil taught citizens that nothing lasts forever, which inspires the fearlessness of the entrepreneurs but also makes them shortsighted. The same is true of the Communist Party. During the reform years, authority has become so decentralized that there's little oversight, and most local governments have to find their own funding. They rely heavily on real estate transactions—a city can acquire farmland, build basic infrastructure, and then sell to industry or commercial developers. Economists estimate that cities receive roughly half their fiscal revenue from such sales, and in many places it's resulted in madcap development, financed by loans from state banks. Cadres take advantage of any opportunity for corruption, because the party has a policy of rotating leaders. "Every five years you change the local government officials," Wang Lina, an economist at the Chinese Academy of Social Sciences, told me. "So they know they have a limited opportunity. Do they worry about the next generation of leaders? They have to get it while they can."

Short-term thinking, both individual and institutional, represents one of China's fundamental challenges. Another issue is simply population. In some ways it's a strength: Of China's 1.3 billion citizens, 72 percent are between the ages of 16 and 64. In modern history the nation has never enjoyed such a large percentage of able workers, and their movement from the countryside has turned China into the world's factory floor. In 1978, when Deng Xiaoping initiated free-market reforms, there were only 172 million urban residents. Now there are 577 million—over 40 percent of the population. Social scientists predict that this figure will approach over 60 percent by 2030. Each year roughly ten million rural Chinese move to the cities, providing a constant supply of cheap labor.

But cheap labor isn't always best for long-term development. It's worth comparing with Whittier's century, when American industry and agriculture were revolutionized. Back then the prime motivator was actually a shortage of workers. The U.S. had plenty of land and relatively few people; anyone who saved a few months' wages could move west and farm. Industrialists had to hire unskilled workers, mostly recent immigrants, and they made the most of limited labor. The need for efficiency inspired innovations that changed the world: the cotton gin, the sewing machine, the assembly line, the American system of standardization and interchangeable parts.

CHINA'S INDUSTRIAL revolution has followed a different path. There's little incentive to save labor, because of constant migration. Competition is ruthless, but it's not the sort that leads to innovation; most plants simply try to shave down the cost of making low-margin products. Education suffers from a similar low-end approach. Chinese schools have been remarkably successful at basic skills—the literacy rate is over 90 percent, compared with 65 percent in 1982, according to the Ministry of Education. But the conservative curriculum depends heavily on rote memorization, and higher education is particularly weak. The next step is to develop a population that can do more than make cheap goods for less.

The people themselves are desperate for better training. In a Chinese factory town, after the early construction is finished and the machines begin to hum, private courses proliferate: English classes, typing classes, technical classes. In Zhejiang I met Luo Shouyun, who had been illiterate when he first left his village; sometimes he had spent as much as a quarter of his income on after-hours training. Now he was a master machinist, with a salary that placed him solidly in the middle class. Another young man had learned Arabic in order to translate for Middle Eastern buyers. An assembly-line worker with a seventh-grade education showed me the book he read at night: *Harvard MBA Comprehensive Volume of How to Conduct Yourself in Society.* "I'm not mature enough," he explained. "Somebody as young as me needs help, and this book can provide it."

It was remarkable what they accomplished with almost no institutional support. That's another contrast to 19th-century America, when rapid development across the nation also amazed visitors, who described new towns rising in

Sandblasted ruins of the Ming dynasty's Great Wall trace the boundary between the Ningxia and Inner Mongolia regions, as 180-foot-tall turbines of the Helan Mountains wind farm capture energy to drive China's future.



distinct stages. Typically the earliest settlers included lawyers, along with traders and bankers. A local newspaper often began printing while people still lived in tents. The first buildings were generally the courthouse and the church, and lending libraries appeared quickly. If it was a tough world, at least there was some early sense of community and law.

In China, though, new cities are strictly business: factories and construction supplies and cell phone shops. Local governments focus on profiteering, and the Communist Party has always discouraged the kind of organizations that contribute in other societies. This is perhaps the nation's greatest human rights challenge. Westerners tend to focus on the dramatic—dissidents, censorship—but it's the lack of institutions that actually hurts most Chinese. Workers are left to fend for themselves: no independent unions, no free press, few community groups. Through sheer willpower, many succeed, but the wasted potential is staggering. In the reform years China has unleashed its remarkable population; the next stage is to learn to respect this wealth.

IN ZHEJIANG I DROVE through a half dozen new towns that were being constructed as part of the Tankeng Hydroelectric Dam. More than 50,000 people were being relocated, and the dam would provide electricity for the region's factories. Nowadays energy shortages have inspired a wave of dambuilding across China, where people are relocated into new communities that follow familiar construction stages: the building supplies for sale, the cell phone shops, the garbage-strewn streets. But there's always a police presence, because of the fear of unrest by people forced to leave their homes. And propaganda banners are everywhere. In Zhejiang it was hard not to become suspicious when the Communist Party's slogans suddenly praised long-term thinking: *Offer the Tankeng Dam as a tribute today / benefit the generations of tomorrow.*

Almost nothing about today's China inspires optimism about environmental issues. National characteristics are potentially disastrous: massive population, weak central government, local authorities that need to raise funds through constant development. According to a World Bank report, China already has four of the ten cities with the most polluted air, and increasingly the nation's problems are the world's. China has become the leading emitter of sulfur dioxide and carbon dioxide. And yet the auto boom has just begun; the nation is responsible for less than 10 percent of worldwide oil consumption.

The fact that China and the world can no longer ignore each other may be the one source of optimism. If these problems are to be managed, collaboration will be crucial. And no one in the developed world should criticize China without taking a hard look in the mirror. The nation has risen by making products for overseas consumption, and there's nothing foreign about the materialistic dreams of average Chinese. An American criticizing China's environmental record is like an addict blaming his dealer.

In Shifan, one of the dam-relocation communities, I joined a family for the first meal in their new apartment. The father was a moderately successful businessman, and he proudly showed me the finished home. It was full of fashionable possessions: a karaoke machine, a 45-inch television, a bed that came with a telephone in the headboard. Most impressive was the lighting system in the living room. A massive chandelier contained nearly three dozen bulbs, and rows of blue lights had been inlaid along the ceiling to evoke the sky. Red bulbs were hidden in alcoves ("They give a warm feeling," said the father). Everything could be flicked on and off by remote control.

For lunch they invited relatives and friends, and throughout the meal everybody complained about the dam. Compensation for lost homes had been too low; promises hadn't been kept; cadres had embezzled. They worried that they wouldn't be able to do business in the new community. "These are very serious matters, and people are upset," the father said to me. All told there were 65 bulbs in that room, and every single one was turned on. □

Ready Cameras A gallery of readers' photographs of China is at **ngm.com.**



THE FACES OF CHINA "For most of my life I have been starving," she says. But now, in rural Shaanxi, she grows more food than she can eat. Like her nation, 82-year-old Du Chenglan has begun to taste abundance, and relish the change. Behind every face in the gallery that follows is a story—of struggle, ambition, delight—and in the unfolding of such stories China's future will take shape.

Huang Zhen *Shanghai*

Ju Xiying *Yanji, Jilin*



Yang Hua *Leshan, Sichuan*



Song Xiaomeng *Baoji, Shaanxi*



Du Xia *Chongqing*



Li Wei *Xinjiang*



Yang Junjie *Pingdingshan, Henan*



Wang Zhuo *Baiyang Lake, Hebei*



Jin Zhaolu *Beijing*



Zhang Jiayu *Nantong, Jiangsu*



Tang Wenqiang *Mianyang, Sichuan*



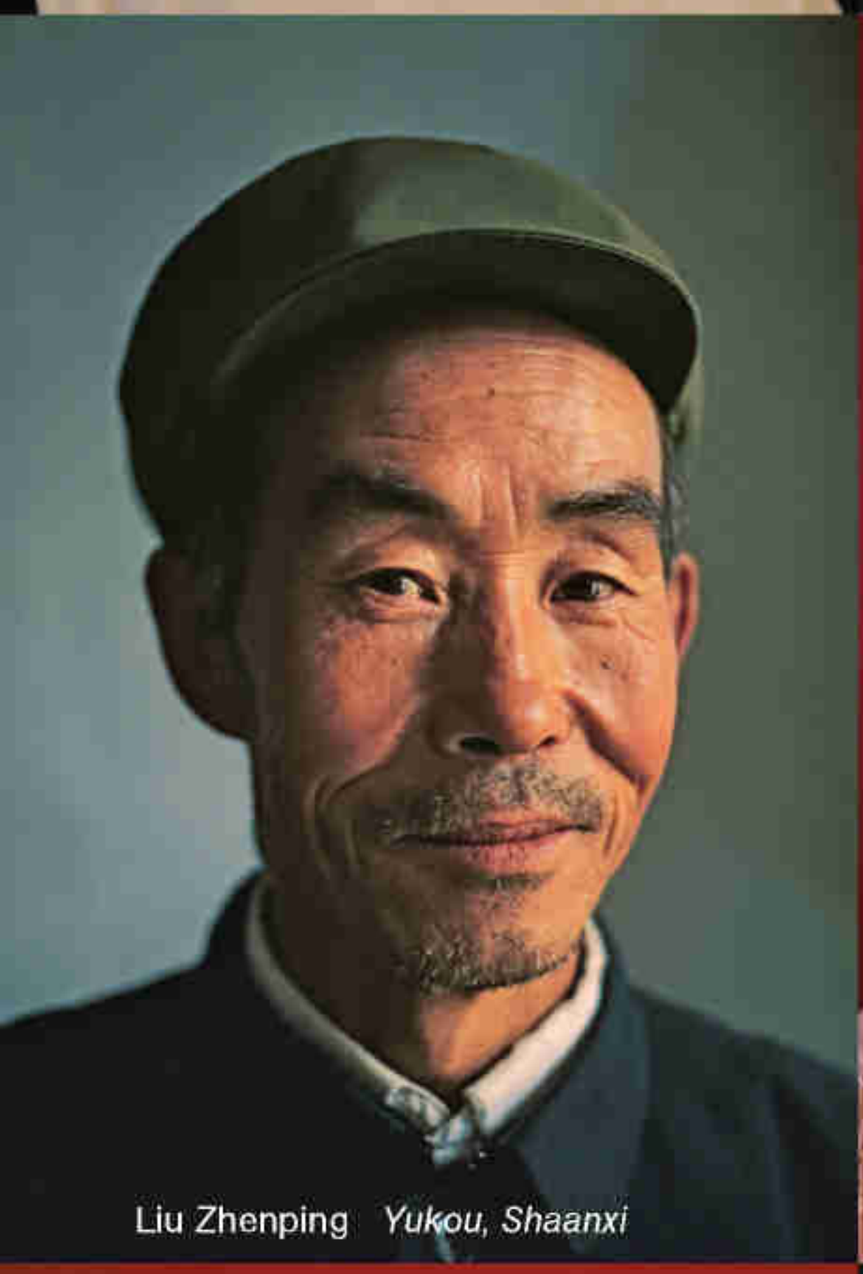
Lobsang Gonpo *Tibet*



Shen Lu *Shanghai*



Ma Wenze *Lianggezhuang, Hebei*



Liu Zhenping *Yukou, Shaanxi*



Zhang Juan *Xianyang, Shaanxi*



Yang Xin *Chengdu, Sichuan*



Wang Jinping *Harbin, Heilongjiang*



Fan Dexin *Fengdu, Chongqing*



Wang Qi *Xian, Shaanxi*

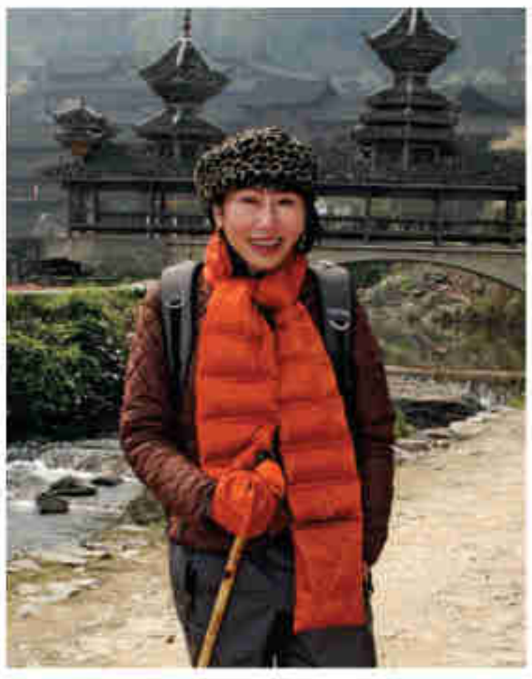
Zhang Cong *Shaanxi*

Lin Xinming *Anhui*



Fritz Hoffmann scans the horizon.

ON ASSIGNMENT **The Waiting Game** With just three trains up and three back from Tibet each day, photographer Fritz Hoffmann and his fixer, Huang Yong, scouted their shot carefully, traveling tracks in Qinghai Province for a week to settle on this spot where the Kunlun Mountains made a dramatic backdrop. Consulting with rail workers, they pinpointed a safe camera location very close to the tracks. Says Hoffmann, "We found this spot, the mountains looked great, the light was perfect. Would somebody please cue the train?"



ON ASSIGNMENT **Village Tales** Novelist Amy Tan (left) first visited the village of Dimen in 2005, during a research trip for an opera she was working on, and was captivated. "You just wonder," says Tan, "what is life like?" She was happy to go back and spend time with the villagers for this issue. Tan stayed in a hotel built by a Hong Kong philanthropist who wants to preserve the village. She had many gossipy conversations with locals in their homes and at events like the baby-naming ceremony where hundreds of guests got caught up in competitive round singing. And she's not done with Dimen yet. "Of course it's going to wind its way into the new novel," she says. "There are too many delicious details."

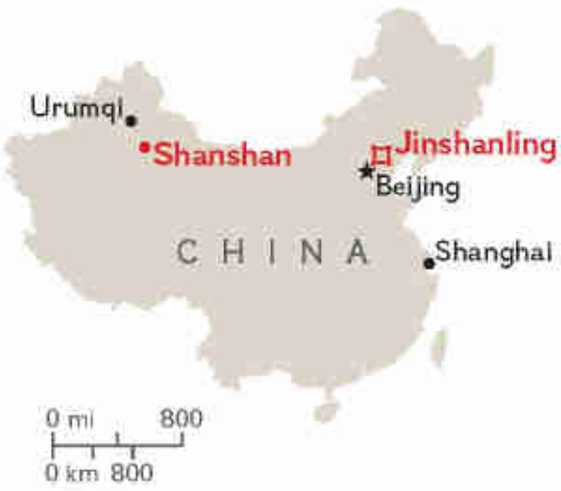
PHOTOS: HUANG YONG (TOP); EMILY SCOTT POTTRUCK



Steinmetz was stitched up in a Shanshan clinic.

ON ASSIGNMENT **Crash Landing** Taking off one day to shoot aerial photographs of the Taklimakan desert near Shanshan (map, right), photographer George Steinmetz ran into trouble: His motorized paraglider banked right on takeoff, caught a tree, and swung Steinmetz into the ground. The crash knocked him out and pushed his teeth through his cheek (above). But he flew again the next day. "There wasn't anything I could do to make it better except let time do its thing," he says. Steinmetz took his aerial photographs while piloting only a few hundred feet above the ground. His main worry was power lines that have gone up everywhere as China has developed. They are "like a rat's nest," he says. In the calm early morning—the best flying time—the power lines hide in shadows. He avoided electrocution but had other problems: In a later crash in Jinshanling, Steinmetz was in a motorized hang glider with a pilot whose cold-numbed feet misjudged the pedals upon landing. The men were fine, but the aircraft was wrecked.





A motorized hang glider (left), which Steinmetz chose for its stability in high winds, crashed upon landing in Jinshanling.

PHOTOS: ALAIN ARNOUX (TOP); LI LEI. NGM MAPS

A World of Photos The winners of *National Geographic*'s second annual International Photography Contest fit well in this special issue on China: They are two Chinese photographers and two Americans, one of whom took his award-winning shot in Tibet. Readers around the world submitted 148,203 images for the contest. Our local-language editions picked their favorites, then forwarded them to Society headquarters for the final judging. The top prizes included a trip to Washington, D.C., for an awards ceremony.



PHOTO ESSAY **Tian Li** Chengziyu, China

Photographer Tian Li captured these villagers in a gate tower on the Great Wall of China, as they prayed for peace and a good harvest. The judges liked how his collection of images—this is just one—put a human face on a national symbol, showing daily life on and around the iconic wall. See the rest of Tian Li's photo essay online at *ngm.com.*

LEGAL NOTICE

If you made a purchase or return at a TJX store listed below, you could get benefits from a class action settlement.

Para una notificación en Español, llamar o visitar nuestro website.

A settlement has been reached with The TJX Companies, Inc. and Fifth Third Bancorp ("Defendants") in a class action lawsuit about the computer system intrusions into personal and financial information at TJX retail stores. The settlement provides benefits to those shoppers who may have been damaged in some way.

The United States District Court for the District of Massachusetts will have a hearing to decide whether to give final approval to the settlement, so that the benefits can be issued. Those included have legal rights and options, such as excluding themselves from or objecting to the settlement. Eligible Class members can submit a claim for benefits from the settlement. Get a detailed notice at www.TJXsettlement.com.

Who's included?

The Class includes everyone in the United States, Puerto Rico and Canada who made a purchase or return at a T.J. Maxx, Marshalls, T.J. Maxx 'n More, Marshalls MegaStore, The Maxx, HomeGoods, A.J. Wright, Winners or HomeSense, believe their personal or financial data was stolen or placed at risk of being stolen from TJX's computer systems, and think they were damaged from it. This includes those who made returns without a receipt and were previously notified by TJX that their name, address and driver's license or military, state or tax identification number were compromised.

Which TJX Stores?

- T.J. Maxx
- Marshalls
- T.J. Maxx 'n More
- Marshalls MegaStore
- The Maxx
- HomeGoods
- A.J. Wright
- Winners
- HomeSense

What does the settlement provide?

If you've been notified by TJX that your driver's license or military, state or tax identification number was compromised: (a) you could get 3 years of credit monitoring with $20,000 in identity theft insurance; (b) you could be reimbursed for the cost of replacing your driver's license between January 17, 2007 and June 30, 2007; and (c) if your driver's license or military, state or tax identification number was your social security number, you can get paid for unreimbursed expenses exceeding $60 from related identity theft between January 17, 2007 and April 12, 2008. If you used your credit card, debit card or check at a TJX store between December 31, 2002 and September 2, 2003 or May 15, 2006 and December 18, 2006, and you have had out-of-pocket costs above $5 and/or lost time between January 17, 2007 and June 30, 2007 stemming from the intrusion(s), you can get one or two vouchers, depending on your documentation, for credit on purchases at the TJX stores in the amount of $30 each (*i.e.*, up to $60 in total in vouchers) or checks in the amount of $15 each (*i.e.*, up to $30 in total by check). TJX will also hold a future, one-day, special event reducing prices on all merchandise by 15% at the TJX stores listed here, available to all shoppers making purchases on the day of the special event. The settlement also confirms steps TJX has taken to strengthen the security of its computer systems. The settlement does not mean the Defendants violated any laws or did anything wrong. The Defendants deny any claims of wrongdoing in this case.

How do you ask for benefits?

Eligible Class Members can call 1-866-523-6770 or go to the website for a claim form, then fill it out, sign it, include the documentation it requires, and mail it to the address on the form. Please note that there are different deadlines for different benefits. The earliest deadline for benefits is **May 29, 2008**.

Your other options.

If you don't want to be legally bound by the settlement, you must exclude yourself by **June 24, 2008**, or you won't be able to sue, or continue to sue, the Defendants about the legal claims this settlement resolves, ever again. If you exclude yourself, you can't get any benefits from the settlement. If you stay in the settlement Class, you may object to it by **June 24, 2008**. The detailed notice explains how to exclude yourself or object.

The Court will hold a hearing in this case, known as *In re TJX Companies Retail Security Breach Litigation*, No. 07-10162, MDL No. 1838, on **July 15, 2008**, to consider whether to approve the settlement, and a request by Class Counsel for fees of up to $6,500,000, and costs and expenses of up to $150,000. You or your own lawyer may ask to appear and speak at the hearing at your own cost, but you don't have to. For more information, go to the website shown below.

www.TJXsettlement.com **1-866-523-6770**

INSIDE GEOGRAPHIC



ANIMAL

Li Feng Hubei, China

These monkeys are destined for a life in the laboratory. Judges appreciated this photographer's hard-edged take.



LANDSCAPE

Dottie Campbell Moab, Utah

Is it a landscape or a photo of a car? A landscape, the judges decided, admiring its reflective approach to a conventional view.



PEOPLE

Jean-Claude Louis Tibet

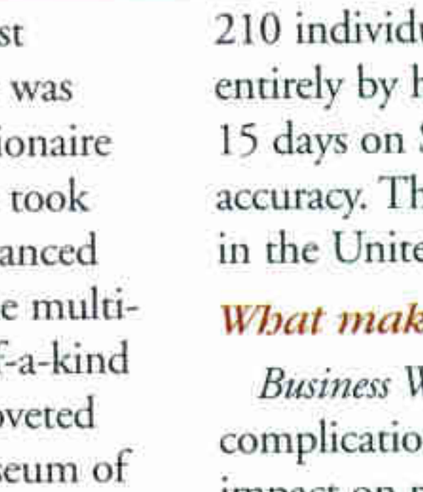
This image of two Tibetan boys won over the judges with its multiple layers, its sense of anticipation, and windowed framing.



World's Most Valuable Timepiece Disappears

Back in 1933, the single most important watch ever built was engineered for a quiet millionaire collector named Henry Graves. It took over three years and the most advanced horological technique to create the multi-function masterpiece. This one-of-a-kind watch was to become the most coveted piece in the collection of the Museum of Time near Chicago. Recently this ultra-rare innovation was auctioned off for the record price of $11,030,000 by Sotheby's to a secretive anonymous collector. Now the watch is locked away in a private vault in an unknown location. We believe that a classic like this should be available to true watch aficionados, so Stauer replicated the exact Graves design in the limited edition Graves '33.

The antique enameled face and Bruguet hands are true to the original. But the real beauty of this watch is on the inside. We replicated an extremely complicated automatic movement with 27 jewels and seven hands. There are over 210 individual parts that are assembled entirely by hand and then tested for over 15 days on Swiss calibrators to ensure accuracy. The watches are then reinspected in the United States upon their arrival.



27 jewels and 210 hand-assembled parts drive this classic masterpiece.

What makes rare watches rare?

Business Week states it best…"It's the complications that can have the biggest impact on price." (*Business Week, July, 2003*). The four interior complications on our Graves™ watch display the month, day, date and the 24 hour clock graphically depicts the sun and the moon. The innovative engine for this timepiece is powered by the movement of the body as the automatic rotor winds the mainspring. It never needs batteries and never needs to be manually wound. The precision crafted gears are "lubricated" by 27 rubies that give the hands a smooth sweeping movement. And the watch is tough enough to stay water resistant to 5 atmospheres. The movement is covered by a 2-year warranty.



The face of the original 1930 s Graves timepiece from the Museum of Time.

Many fine 27-jewel automatics that are on the market today are usually priced well over $2,000 dollars, but you can enter the rarified world of fine watch collecting for under $100. Try the handsome Graves '33 timepiece risk free for 30 days. If you are not thrilled with the quality and rare design, please send it back for a full refund of the product purchase price.

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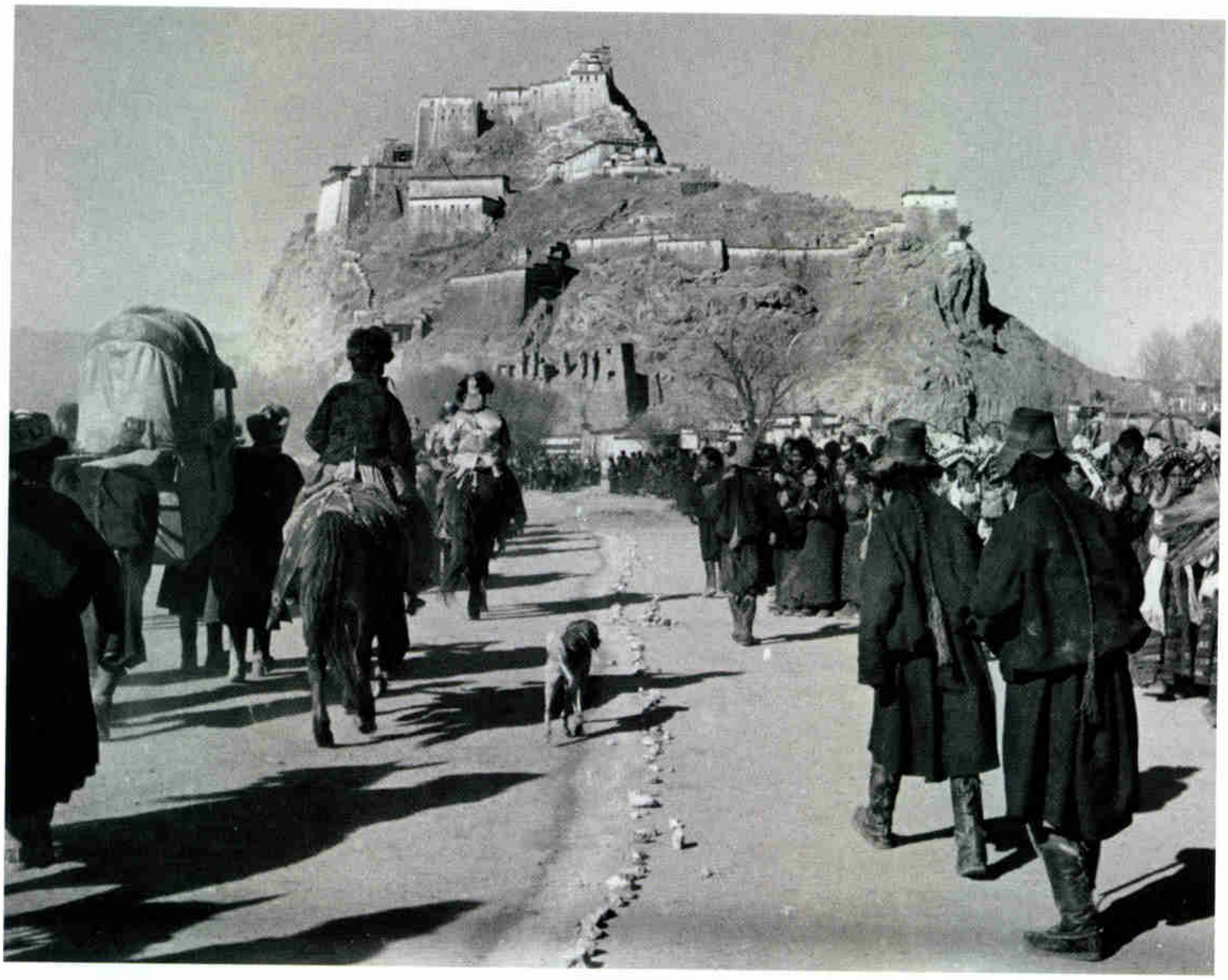
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FLASHBACK



Leaving Lhasa His palanquin carried on the shoulders of the faithful (left), the 15-year-old Dalai Lama fled Tibet's capital as the Chinese army advanced in 1950. "Pious Tibetans hurried from far-off settlements to see him, for being in his presence gave incomparable blessing," wrote Heinrich Harrer, who served as the young leader's tutor and reported on his experience in the July 1955 *Geographic*. "They lined the entire trail from Lhasa to Chumbi Valley, 200 miles southwest, with parallel rows of pebbles to protect their harried King from evil spirits." The Dalai Lama was able to return to Lhasa the next year. He escaped again, to exile in India, after a failed Tibetan uprising against Chinese rule in 1959—and has never been back. *—Margaret G. Zackowitz*

Look Into Our Archive See more *National Geographic* coverage of Tibet at **ngm.com.**

PHOTO: HEINRICH HARRER

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